PAGE 6 PUBLISHING's

NEW ATARI USER

Issue 41 £1.75
December/January

XL/XE

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A great game for up to twenty players!

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for the STAR LC-10

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Teach your children maths the fun way

ST FILE



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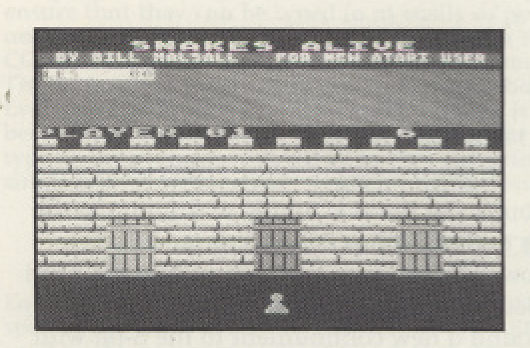
NOTE: For every disk sold a donation will be made to the High Tech Team in appreciation of the best 8-bit demo we have ever seen. If you like this demo we may be able to encourage these Atari 8-bit wizards to do more!

THE BEST XL/XE SOUND AND GRAPHICS DEMO EVER?

'The magazine for the Dedicated Atari User'

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SUBMISSIONS

PAGE 6 welcomes and encourages its readers to submit, articles, programs and reviews for publication. Programs must be submitted on disk or cassette, articles should wherever possible be submitted as text files on disk. We seek to encourage your participation and do not have strict rules for submissions. If something interests you, write a program or article and submit it! Appropriate payment will be made for all published programs and articles.

The next issue of NEW ATARI USER will be on sale 25th January
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PAGE 6 PUBLISHING's

NEW ATARI USER

Issue 41
December/January 1989

'The Magazine for the Dedicated Atari User'

ISSN No. 0952-4967

THE CREDITS

All of the usual stuff is on page 3 but here are the people who made this issue possible.

Les Ellingham managed to stay awake long enough to do the editing, layout etc.

Sandy looked after the advertising and mail order

John R. Barnsley helped out as usual (does the R stand for Rastus or Elton John?)

The Regular Contributors, who provide the backbone of the magazine and can generally be relied upon to come up with good articles and reviews, are ....

Mark Hutchinson
Matthew Jones
John Davison
John Davison jr
John Sweeney
Paul Rixon
Damon Howarth
Garry Francis
Ian Finlayson

All other contributors for this issue are individually credited alongside their articles or programs. Thanks to everybody for sharing their work and enthusiasm with other Atari users.

Sorry about the short deadlines Garry!

The cover picture depicts the famous Indiana Jones from the film Raiders of the Lost Ark. Two Indiana Jones games are reviewed this issue and the picture fits in nicely with our main type-in game. The photograph is copyright Lucasfilms.

Lots of good music this time around, it's that time of year. Storms from Nanci Griffith is as wonderful as the others, as is a very early and hard to come by Michael Johnson album called Wings. Tracy Chapman's new one follows in similar vein whilst the Eurythmics continue in style if not in strength. A nice live John Prine CD with nineteen tracks proves that very few can write so many songs of such quality, a bit of nostalgia there. Big surprise is Jean Michelle Jarre whose live recording of the Docklands concert (although it isn't credited as such) is quite surprisingly brilliant, much better in fact than actually being there on the night! Most strange. Also strange is Ancient Beatbox purchased because of its folk music influences and the fact that it was put together on a 1040ST. Takes some getting used to! Bob Dylan's is good but somewhat subdued and Kate Bush has managed a lot straighter sound even though the musicians involved should have made it otherwise. All these and more played constantly in the background whilst the words came together. Best of all though was Runrig who always were brilliant and on the Page 6 turntables long before anyone but the few had even heard of them.

NEW ATARI USER is the magazine, PAGE 6 is the concept. Wherever you see PAGE 6 you'll know what it means!

The next issue of NEW ATARI USER could feature YOUR article or program, so SEND IT IN NOW!

PAGE 6 shows just what you can do with your Atari. With the exception of final output on a Linotron and use of a repro camera for the listings and photos, the magazine is prepared entirely with Atari based equipment and software - not a Macintosh or IBM in sight! Hardware used includes 130XE, 1050 disk drive, 810 disk drive, 410 cassette (occasionally!), 850 Interface, NEC 8023 printer, 1040ST, SM124 Monitor, Atari SH204 hard disk drive, Cumana 1 meg disk drive, Epson RX100 printer, Kyocera laser printer, Microstuffer printer buffer. Software includes Superscript, Turbo Basic, Kermit, PC Intercomm, TARI-TALK, Print Wiz, PC Intercomm, STWriter, Protext and Fleet Street Publisher. Articles and programs submitted on XL/XE disks are subjected to various custom written programs before being transferred across to the ST via TARI-TALK. All major editing is done with Protext and pages are laid out with Fleet Street Publisher. A disk with the finished pages is sent up to The Setting Studio in Newcastle (a typesetting bureau who really know what they are doing with the ST) to be output on a Linotron 300 and, hey presto, finished pages are sent back. It really does work - at last! All that is left is to drop in the listings and photos. Well, it's not quite as easy as that, but you get the idea!

Editorial

AT LAST!

After a very quiet year it seems, at last, as though the world is finally waking up to the fact that the 8-bit Atari is still very much alive and still selling. In recent months new software has become increasingly rarer but now with two new labels including the Atari in their plans we should see dozens of new releases, or re-releases, over the coming months. Atari themselves also seem to have found a new commitment to the 8-bit with several new titles released and plans to convert many of their ST titles. It's looking good!

I wonder why it has taken this long for the software companies to sit up and take notice? Most have blamed piracy on the Atari, which was indeed a major problem, but many now feel that the newer breed of Atari owner does not feel so inclined to pirate software especially as much of it is now available at budget prices. The pirates seem to have moved on to the ST and Amiga leaving the Atari 8-bit market to pick itself up again. One thing that will be important over the coming months is that this market does indeed materialise otherwise these new companies may well join the ranks of those who have deserted the Atari. The future of software availability really lies in your hands and it is up to you to go out and purchase as much new software as you can afford. If you don't you will will end up with a pocketful of money and nothing to buy.

HAWKQUEST - WE DID IT!

It is very gratifying to learn that, through the efforts of PAGE 6, Hawkquest (reviewed in Issue 39) will see the light of day as a full commercial release. Many people wrote to us asking why we didn't release it ourselves. The answer is that it was too good! Whilst we are quite happy to publish software, we have to recognise that we are not a software publishing company with access to the distribution channels required to get a piece of software out to the shops. We could probably sell a reasonable number via the magazine, but an awful lot more could be sold via the established shops and mail order suppliers. Strangely, many people will respond to an advertisement, not by buying direct but by going down to their local shop to buy. We still get calls from people who have seen our advertisements for things like TARI-TALK asking where they can buy it!

As far as Hawkquest is concerned we would much rather that the authors received as much in the way of royalties as possible and we felt that an established company could achieve higher sales. We may have lost the chance to make a few bob ourselves but so what if the Atari community as a whole gets the benefit.

NEW COMPUTER EXPRESS STINKS!

Nice to see that we recently got a mention in the New Computer Express Atari column mentioning our public domain library but then they have to go and put in the snide remark about PAGE 6 being a 'back bedroom' publisher. I wouldn't dream of saying that the New Computer Express Atari column is about the same size as a piece of toilet paper, would I? Seriously, though, I wonder what makes these 'big' mags put down those who quietly go about their business without all the hype that seems necessary nowadays to ensure success? Maybe it's insecurity. Maybe they don't really know what they are doing and try to put down those who do. That could be it, for in the very next column Edmund Blake reports that the Alternative Micro Show is being held in Tamworth on the 26th November. Totally wrong! What's more he goes on to do the struggling Atari software industry a great power of good by telling people how to rip off cartridges! The column is even headed 'Jolly Roger'.

I was quite pleased that New Computer Express decided to carry an Atari column but it would be nice if they could actually show that they do really have the interest of the Atari at heart by accurate reporting and by supporting others and by not condoning the very thing that has caused lack of support in the past. If you feel inclined perhaps you might drop Edmund Blake a line to let him know how all you 'back bedroom' readers feel.

NICE TO SEE YA!

Finally it was great to see so many of you at The Alternative Micro Show and to have time to stop and chat. A nice relaxed show with plenty to see. See you next year. (Thinks ... I just hope that they turn up, since I have to write this about two weeks before the event!)

HOW TO TYPE IN THE LISTINGS and get them right!

The program listings in NEW ATARI USER are prepared carefully to ensure that they can be typed in as easily as possible. Before typing any listings ensure that you are familiar with the use of the Shift and CONTROL and INVERSE keys as outlined in your computer manual. The listings are prepared to match exactly what you see on screen. Every character that you may see in a listing is included in the chart below for cross reference. By using TYPO 3 you can ensure that you type in the programs EXACTLY as they are printed. Remember, a single typing mistake may mean a program will not run.

WHAT ARE THOSE CODES?

Each line of a program printed in NEW ATARI USER begins with a special two letter code. THESE SHOULD NOT BE TYPED IN. They are used by the program TYPO to check that you have typed each line correctly. IF YOU HAVE NOT ALREADY TYPED IN THE TYPO 3 LISTING PLEASE DO SO NOW. The program can be used as you type in each line of a program or to check an already typed program. The code for each line will match but if you have problems check the listing conventions below carefully, you are most probably typing a CONTROL character incorrectly. TYPO 3 cannot check whether a line has been missed so if you have problems in running a listing count the lines in the program and ensure none are missing. If the TYPO codes match and the program still does not run, LIST it to cassette or disk using LIST "C:" or LIST "D:filename", switch off the computer, re-boot and then ENTER the program using ENTER "C:" or ENTER "D:filename". Save this version in the normal way.

HOW TO USE TYPO 3

1. Type in the listing carefully for although you can use TYPO 3 to check itself (see 6 below) it may not work if you have made mistakes.

2. SAVE or CSAVE a copy of the program.

3. Each time you want to type in a program listing RUN TYPO 3 first. The program will install a machine code routine in memory and then delete itself. Now type in a line as shown in the magazine *excluding the first two letter code* and press RETURN.

4. A two letter code will appear at the top left of your screen. If this code matches the one in the magazine carry on and type the next line. Note, the code will not match if you use abbreviations. If you prefer to use abbreviations LIST the line you have just typed, move the cursor to that line and press RETURN. The code should now match.

5. If the code does not match, use the editing keys to correct the line and press RETURN again. Repeat if necessary until the codes match.

6. To check a line you have already typed LIST the line, place the cursor on that line and press RETURN.

7. When you have finished a listing just SAVE or CSAVE it in the normal way.

You can type in a program without using TYPO 3 and then check it by SAVEing or CSAVEing a copy of the program, running TYPO 3 and then LOADing or CLOADing your program and proceeding as in step 6 above.

Always SAVE or CSAVE a program before running it and always use TYPO before telling us that a program will not run.

OUR UNIQUE LINE BY LINE CHECKER WORKS ON ALL ATARI XL/XE and earlier 8-bit machines

```
EI 1 REM ******************************
AL 2 REM *  TYPO III by Alec Benson    *
         *         June 1985           *
SA 3 REM * A proofreader for ANTIC and *
         *   PAGE 6 based on TYPO II   *
         * published by ANTIC magazine *
EL 4 REM ******************************
SG 100 GRAPHICS 0
WG 110 FOR I=1536 TO 1791:READ A:CK=CK+A:
   POKE I,A:NEXT I
CG 120 IF CK<>30765 THEN ? "Error in DATA
    statements - Check Typing":END
YM 130 A=USR(1536)
VT 140 ? :? "TYPO III is up and running":
   NEW
MA 1000 DATA 104,160,0,185,26,3,201,69
HG 1010 DATA 240,8,200,200,200,192,36,208
QB 1020 DATA 242,96,200,169,79,153,26,3
RK 1030 DATA 200,169,6,153,26,3,162,0
RR 1040 DATA 189,0,228,157,79,6,232,224
TO 1050 DATA 15,208,245,169,93,141,83,6
KC 1060 DATA 169,6,141,84,6,173,4,228
EU 1070 DATA 105,0,141,95,6,173,5,228
BK 1080 DATA 105,0,141,96,6,169,0,162
KK 1090 DATA 3,149,203,202,16,251,96,0
ZR 1100 DATA 0,0,0,0,0,0,0,0
LD 1110 DATA 0,0,0,0,0,0,32,94
JM 1120 DATA 6,8,72,201,155,240,55,230
TV 1130 DATA 203,133,209,138,72,169,0,133
TW 1140 DATA 208,162,8,10,38,208,6,209
MF 1150 DATA 144,7,24,101,203,144,2,230
RL 1160 DATA 208,202,208,239,133,207,24,1
    65
TM 1170 DATA 204,101,207,133,204,165,205,
    101
AW 1180 DATA 208,133,205,165,206,105,0,13
    3
XH 1190 DATA 206,104,170,104,40,96,138,72
NR 1200 DATA 152,72,162,0,134,207,134,208
GF 1210 DATA 160,24,6,204,38,205,38,206
EA 1220 DATA 38,207,38,208,56,165,207,233
TM 1230 DATA 164,170,165,208,233,2,144,4
SK 1240 DATA 134,207,133,208,136,208,227,
    162
CB 1250 DATA 8,165,207,133,204,165,208,6
XN 1260 DATA 204,42,201,26,144,4,233,26
MB 1270 DATA 230,204,202,208,242,133,205,
    169
BC 1280 DATA 128,145,88,200,192,40,208,24
    9
WV 1290 DATA 165,204,105,160,160,3,145,88
QA 1300 DATA 165,205,24,105,161,200,145,8
    8
MQ 1310 DATA 32,69,6,104,168,76,153,6
```

Normal	Inverse	Shift	Inverse Shift	Control	Inverse Control
1		!			
2		"			
3		#			
4		$			
5		%			
6		&			
7		'			
8		@			
9		(			
0		)			
<					
>					
a		A			
b		B			
c		C			
d		D			
e		E			
f		F			
g		G			
h		H			
i		I			
j		J			
k		K			
l		L			
m		M			
n		N			
o		O			
p		P			
q		Q			
r		R			
s		S			
t		T			
u		U			
v		V			
w		W			
x		X			
y		Y			
z		Z			
-		_			
=						
;		:			
+		\			
*		^			
,		[			
.		]			
/		?			

■ INVERSE SPACE

Other codes

	ESC ESC
↑	ESC CTRL -
↓	ESC CTRL =
←	ESC CTRL +
→	ESC CTRL *
	ESC SHIFT CLEAR
	ESC DELETE
	ESC TAB
	ESC SHIFT DELETE
	ESC SHIFT INSERT
	ESC CTRL TAB
	ESC SHIFT TAB
	ESC CTRL 2
	ESC CTRL DELETE
	ESC CTRL INSERT

BYTE BACK BRINGS EM BACK



Just when you thought Atari software was becoming hard to find along comes a new independent budget label who have not only secured the rights to all of the Red Rat titles but also intend to convert titles from other machines. Byte Back have at least eighteen titles lined up for release on the Atari 8-bit!

First releases are **COSMIC PIRATE** (reviewed this issue), which has been converted from the ST, and the Red Rat titles **SCREAMING WINGS**, **DOMAIN OF THE UNDEAD** and **LITTLE DEVIL**. Later releases will include the famous, and highly respected, **SPEED RUN**. Amongst the titles being converted from other machines look out for **KENDO WARRIOR** a big hit in the C64 and Spectrum. All the titles will retail at £2.99.

The label is the brainchild of Richard Bielby who has previously worked for a company who handled the distribution for Firebird and Mastertronic and if you check in the large multiple stores and small newsagents you will find that almost all the Atari software available in those outlets is on those two labels. It would seem therefore that Byte Back will have no problems in getting their titles out to the customers. One innovation that has caused a huge stir in the computer industry is Byte Back's decision to go outside the computer press for their advertising by becoming one of the first companies to advertise in the Beano and Dandy comics. Explaining his reasons for choosing this novel field of advertising, Richard Bielby said "At £2.99 budget software is an impulse buy and as Byte Back will be on sale in local newsagents and high street stores we felt that we should try advertising directly to the kids who regularly visit those shops". Beano and Dandy have a circulation of over half a million with a readership probably double and there seems a strong liklihood that a good number of those readers own computers. So look out for the Beano and Dandy, now you have no excuse to be embarrassed at buying comics!

ALTERNATIVE BIKING



PRO MOUNTAIN BIKE is a new title for the Atari 8-bit range from Alternative Software. You will need a strong joystick rather than strong legs in this simulation in which you must ride your mountain bike over many obstacles, use the gears to get up the mountains and carry your bike when the going gets too tough. There are logs, potholes, rocks swamps, ramps and more to bar your way as you battle against a friend or the Atari.

Mountain biking has never been so cheap, just £2.99 from your usual Atari dealer and it should be available now.

PAPERBOY AT LAST?

A brand new label recently launched will be including the Atari 8-bit in its planned releases and they have some very classy games lined up. The label is Harlequin and is set up by Stephen Goss and Tony King who have had long experience in the distribution side of the computer industry and are well placed to ensure that products on the Harlequin label reach the end user. Among the many exciting deals lined up are the rights to the entire Psygnosis catalogue which will mean that top class 16-bit titles like **MENACE** will be coming to the 8-bit Atari! Also in line are titles from System 3 including **LAST NINJA 2** and the company are negotiating with Elite in the hope that they can also bring **PAPERBOY** to the Atari.

All titles will be available on both cassette and disk as 'full price' games retailing at £9.99. The company will also be producing titles for the VCS system.

In order to bring these plans to fruition, Harlequin need more confident Atari machine language programmers who are capable of coping with conversions. They already have a team of three top class Atari programmers but need others to ensure that as many of their games as possible can be converted to the Atari. If you can program in machine code and handle conversions from other machines give Stephen Goss a ring now on 0734 583062.

HAWKQUEST RELEASED

Yes, our pre-review did pay dividends as the end of November will see the release of **HAWKQUEST** (see issue 39) by Red Rat Software. This complex and highly entertaining game will initially be on disk but Red Rat have the authors busily working on a cassette version which will be released as soon as possible after the disk version. Red Rat Software decided that they would like to release the game after reading our review.

You may remember that **HAWKQUEST** is a huge interplanetary game with five planets to explore each of which has a main game and a sub-game. The graphics are outstanding and the game achieves a brilliant combination of arcade shoot-em-up and action adventure with sheer fun and addictiveness not seen in an Atari game since some of the classic American multi-disk games of some years ago.

HAWKQUEST will retail at £19.95 for the two-disk package which might seem a little expensive in today's budget age but you should remember that games of this scope and quality used to cost over £50 when imported from America a few years ago! The tape version will be in two parts due to the length and complexity of the game and will retail at £7.95 for each part.

HAWKQUEST is the most exciting game release for the Atari 8-bit in recent years and we highly recommend that you show your appreciation to Red Rat by making sure you have a copy in your collection. New Atari User are proud to have been instrumental in bringing a great Atari game to the market, a game that shows just how good the Atari still is.

NO MORE LEVEL 9

Level 9's latest release SCAPEGHOST will be their last on the Atari 8-bit as, in a surprising move, they have decided to drop out of conventional adventuring and concentrate in future on 16-bit role playing and arcade games. The Austin brothers have developed a games writing system on the ST which will enable them to write sophisticated action games with cinematic effects which can easily be ported over to other 16-bit machines.

At the PC Show, Pete Austin explained that sales of the traditional adventures had fallen off over the past few years and that they had sat down about a year ago to try and decide which way the market would go. They felt that action games were what the public now wanted and so set out to develop a system that would allow them to create arcade style games that could include some of the story depth that Level 9 had become famous for in their adventures. At least four games are underway but Pete would not comment on the details as publishing agreements had only just been reached with an American company. One of the games being demoed at the PC Show was RAJ, a game based on the British Raj and the sort of depth that Level 9 hope to bring to the game is shown by the fact that Pete Austin had read over 20 books on the British Raj in order to develop the story!



Level 9's last Atari 8-bit release

Whilst many arcade games tend to be similar, Pete Austin is determined that Level 9 games will be packed with fine detail. One such aspect that he has spent a lot of time on is making sure that all of the characters in a game blink!

So we have the end of an era. Good news, perhaps, for ST owners who may see some vast improvement in standards but bad news for Atari 8-bit owners who will lose one of the companies that has always included the Atari in the release schedule of every game they have programmed.

Reports on Scapeghost are that Level 9 have kept up their high standard and introduced a few new thought provoking ides. Full review next issue.

A NEW 130XE?

There are reports in the States that Atari have revamped the 130XE by replacing the RAM chips and rewriting the Operating System to test the extra 64k of memory. There are, apparently, no changes in the capabilities of the computer so you have no need to sell up and buy a new one, but it does show that Atari are still committed to the 8-bit range. They have in fact even gone to the trouble of rewriting the manual!

We are not sure whether the new versions are on sale in the UK but as they remain totally compatible with other XL and XE machines there is no need to worry about what machine you might have.

MAILBAG

write to
Mailbag
P.O. Box 54,
Stafford
ST16 1DR
ENGLAND

WHY BUY A DISK DRIVE?

About six months ago I purchased an Atari 65XE and I am absolutely enthralled by it but I was wondering what the advantages were for buying a disk drive as I have a tape recorder and can get some good games on cassette as well as on cartridge. So what is the advantage in buying a disk drive?

David Congreave
Leeds

It all depends on what you want to do with your machine. A disk drive is far more versatile and a lot faster than using tape and if you want to use your machine for programming or more 'serious' things like word processing then we would suggest that a disk drive, despite its high price, is almost essential. If you only play games then you might not consider the outlay worthwhile especially as the games you may buy are going to cost more. A few years ago there was every reason for games players to buy a disk drive as almost all the games available were on disk as well as cassette and there were some highly sophisticated games that were only available on disk but the situation now is quite the reverse. It is now very rare for games to be issued on disk and quite difficult to transfer many tape games to disk so if you are happy to just play games you may as well stick to your cassette. What you will miss out on is the huge number of excellent public domain programs in the Page 6 Library and you will be consigned forever to having to wait 15 or 20 minutes for a game to load that would load in thirty to forty seconds from disk. A disk drive might not seem an essential purchase now but we can guarantee that if you do buy one you will wonder how you ever did without it!

PORTABLE XL

I have got a few problems which I hope you can help me with. Firstly is it possible for me to run my 800XL and its accessories, like the XC12, on batteries, and if so, how? Secondly I was flicking through some back issues of Atari User when I came across a chart showing what each pin in the joystick, monitor and accessory sockets did. My interest was aroused when I saw that the joystick socket could be used as an output socket. I set to work trying to write a program which would control my model train layout when I came across a snag. How do you use the joystick socket as an output device? I tried STICK(0)=4 but the computer just replied with 'Error 9'.

Simon Lewis,
London

We have no idea if the XL could run on batteries, does anyone else know? It may be possible but brings to mind the joke about the world's tiniest hearing aid, impossible to see but it takes both hands to carry the batteries! The joystick ports can indeed be used for output but to be effective they need to programmed in machine code. We suggest that you get hold of a copy of Mapping The Atari which will give you essential information regarding the memory locations required to control the joystick ports and then check out some of the articles by Len Golding in back issues of Atari User. Len was responsible for producing many gadgets that can be controlled through the joystick ports and you may be able to adapt some of his routines. Unfortunately we don't have any back issues of Atari User available for purchase and there are no plans at present to cover this subject in New Atari User, at least nobody has submitted an article for publication.

NOT SO SUPER TYPO

I have typed in your Scrolly Text editor from Issue 37 and tried to create the machine code listing called SCROLLY.OBJ from it. The program started to create the file but before it was complete it came up with 'Error 7 on line 70' which means a number greater than 32767. I typed in the listing using SUPERTYPO II from Antic magazine. This program allows you to type in the checksum letters as well and tells you if you have made a mistake by beeping at you and turning the screen red. Before I saved the listing I double checked it with the preview method from SuperTypo II and everything was a match so could you please explain to me what went wrong with the listing?

Tom Butel,
Australia

There is nothing wrong with the listing. If there were we wouldn't have had all the scrolly messages we received sent to us. We haven't come across SuperTypo II yet as Antic suddenly stopped sending us our exchange copy so can't comment on its compatibility with TYPO III but if you say it doesn't show errors yet the program won't run then there may well be compatibility problems. With very long programs it is sometimes possible for the listing to become corrupted when other utilities are used and this could be the problem. It might not show up when you type the program in but when it is RUN the program may expand in memory and destroy part of itself. We suggest that you use TYPO III and load in your saved listing, then list each line to the screen, move the cursor up and press RETURN to generate the TYPO 3 code and check this manually. If you still don't find an error then the problem must lie somewhere else. Are you using DOS 3? If so chuck it away and use DOS 2.5 as that could be your problem. Are you using some other DOS? If so it could take up more memory than DOS 2.5 and this could be the problem. Other than that we give up. Finally, please note that the offer of an exchange disk for scrolly messages is now closed so please don't send in any more.

BUSINESS USE

I would like to congratulate you for making all the efforts to produce a brilliant magazine. I hope that you can help me to solve a problem. I have tried many times to write an inventory program for my small shop where I can enter daily sales by entering an item code, quantity sold and total price and then the next item and and so on for the whole day. The computer should calculate the quantity in stock, total quantity sold and total sale

and then save these on a file and this file should be updated by entering the daily sales.

Please can you tell me if such a program is available that will work on my 800XL and 1050 disk drive and if the magazine is going to present this type of program in the future.

Mousa Al-Yousfi
Kuwait

The 800XL can certainly handle this type of situation and the program is not particularly difficult to write but, unfortunately, we have no plans to publish such a listing in view of its limited interest. We do know that there are a number of our readers who use their XL or XE computers in shops and businesses so maybe there is someone reading this who can help Mousa out with just the program he needs. If you think you can help drop Mr Al-Yousfi a line via New Atari User. We will pass your letters on.

MIDI, WHAT MIDI?

With reference to your issue 38, I read the article on Midi and it said that Midi was available on the XL/XE as MidiMaster and would be reviewed in the next issue. On reading the next issue, I was disappointed not to find anything about it. If there is a Midi interface and software could you please send me details.

G. J. Boyce,
St. Neots

Ah, but you don't read your New Atari User properly, do you? If you checked the bottom of page 50 of Issue 39 you will find that we had found problems in getting the Molex plugs necessary to make up the interface. There is indeed a Midi interface for the XL/XE but it is no longer available from the original manufacturers. We have obtained an agreement to market MidiMaster, if we can come up with sufficient Molex plugs. We have located 32 plugs and are having this many interfaces made up. They could be the only ones made so it might be wise to book yourself one. The price is likely to be around £24.95 for the interface and software. Molex plugs are still available but only in quantities of 500 up and there is no way we are going to sell that many Midi interfaces. There must be a dealer in the States from whom these plugs are available in small quantities, so how about one of our American readers doing a bit of research for us?

EDUCATIONAL GAMES

Please could you print me a list of educational games for the XL/XE for children aged 10 or over or for adults and advise where to get them.

Michael Daw,
Weston-super-Mare

Right, are you ready? The best game is .... Then there is .... And of course there are ...
Sorry about that Michael but this is an area where the Atari has always been lacking and there are no 'games' of this nature that we know about. We have published a fair few listings in the past which are in the educational area and program like MCQ TEST from Issue 39 can be easily adapted for your own quizzes. There are some excellent trivia and quiz programs in the Page 6 Library and we have recently come across some excellent true education programs that will be added to the Library in due course. These are all on disk, if you want programs on cassette, I'm afraid you have next to no chance.

PRINTING PICTURES

I have an 800XL and a Taxan Kaga KP810 dot matrix printer. I also have the AtariArtist Touch Tablet and cartridge. I have saved many pictures to disk but I have been unable to print them out. Is it possible to print out using the AtariArtist only or must I acquire a separate utility to do so? If so can you recommend a utility or program?

I.W. Stockings
Maldon, Essex

No you can't print out from AtariArtist, nor as far as we know from any currently available paint package. A separate utility is required and the one you use depends on your printer. The Taxan is supposed to be Epson compatible but a lot of printers cease to be 'compatible' when it comes to printing out graphics. There are no commercial programs available but you might like to try Disk 58 - Graphic Construction Set from the Page 6 Library which has a program to dump Micropainter pictures to Epson, NEC and other printers. It should work on the Taxan but we don't have the facilities to test it. The utility does not work directly with AtariArtist pictures, you have to save them in different format first, Steve Williamson's Machine Code Library this issue tells you how. The disk is available from us for £2.95 and if you don't have a catalogue give us a ring for there are loads of other utility disks available. We get asked this type of question quite often and obviously can't try out all the different printers so how about readers dropping us a line with details of what programs they have found to work on their particular printers? We could maybe compile an article for general guidance. If you have a printer, tell us what does and what doesn't work on it, either commercial programs or public domain.

THOSE LISTINGS!

SMALL BUT PERFECT

I have owned an Atari 65XE for several months now. As a pensioner with not very good eyesight, I find your listings hard to see but I have, however, managed to get every listing I have typed in to work thanks to your TYPO III listing. I had trouble getting the old Atari User listings to work so I wrote to E.D. Hughes mention in your issue 38 and received excellent service. For £1.50 I received, return postage, an Agfa C60 cassette full of Atari User listings. My thanks to Mr Hughes and to your magazine for putting me in touch with him.

T.H. Nott,
Leeds

There you go, all those who write complaining that our listings don't work, just use TYPO III properly and you should have no problems. As for the listings being hard to see, yes they sometimes are but that is the only way we can get so many listings in each issue. For a solution to the problem read on.

TAKE UP EMBROIDERY!

With reference to readers' complaints about the printing of listings being too small and unreadable, I would like to offer the following solution. GO along to an embroidery shop and purchase a magnet board which will be complete with magnets and also a magnifying bar with magnets attached to it. Place the board behind the page to be read and then slide the magnifying bar down the listing line by line as it is typed in. It will be found that small print will be seen much easier and also the place will be kept as work progresses. If the print is big enough to be seen then the magnets supplied with the board can be used instead of the magnifying bar if desired. I use this method all the time as it speeds up the whole process of typing listings.

I hope this small tip will be of use to the older readers who have difficulty in seeing small print and get as much pleasure from typing in your listings as I do.

Ronald Scarterfield,
Chichester

Thanks for the tip, seems quite a good idea. No letters please complaining about the lack of support from embroidery shops in your area!

LIST IF

A NEW COMMAND ADDED TO BASIC

by S. J. Shephard

I became an Atari user almost by accident. The computer that I really wanted was a BBC, but as they were too expensive I bought an Atari instead. Now that I have used my Atari, and also a BBC at school, I am pleased I didn't waste my money. Yes, BBC Basic has lots more commands and is faster than Atari Basic (not so much better than Turbo Basic though!), but the programming environment is awful! The BBC text editor only allows you to type in a line at the position of the current prompt. On the Atari, we would be able to type in a line and have it entered anywhere on the screen. If we wanted to alter a line in a program, we would simply move the cursor to the item we wanted to change, change it, press RETURN and it would have been done. Not so on the Beeb. You would have to move the cursor to the relevant line, use the COPY key to copy the line up to the part to be altered, change this, move the cursor to skip over the old unaltered section and copy the rest of the line. Another annoying feature of the BBC is that it is very easy to switch off the CAPS LOCK while switching on the SHIFT LOCK, and you don't notice you've done it until you try typing in numbers. And can you imagine programming without the CONTROL+DELETE and CONTROL+INSERT keys, without the RESET key, or even the CLEAR key? It also doesn't detect syntax errors while you are typing them in, only when it reaches them in a program, and unlike the Atari it doesn't tidy up messy program lines.

It was while using a BBC Master at school and cursing its inferior programming environment that I discovered one useful feature which the Atari lacked. This is the LIST IF... command. What this does is to list selective lines of a program e.g. the command LIST IF PRINT would list all the lines of a program containing the word "PRINT" somewhere, such as a PRINT statement, a variable name or in words like PRINTER. This is very handy in long programs as you can imagine, and it was while complaining to my computing teacher about the BBC's programming environment that I was forced to admit that this command was useful and that I wished I could have such a command for my 800XL. To which he replied "Why not write one yourself?". You have no doubt already guessed that my next thought was on the lines of 'just a little bit difficult' but due to the structure of the Atari OS and the flexibility of good old Atari Basic I was able to find a way (and an easy one at that) to do it.

Atari Basic allows you an enormous range of input/output commands on any device you like. It achieves this by a construct known as the 'device string', that letter/colon identifier you use in OPEN, LOAD, SAVE, ENTER and other commands (e.g. LOAD "D:filename.ext" or OPEN #1,8,0,"P:"). One other command to use a device string is the LIST command. If you could create a device that read a line of a program, looked for a certain word, and printed the line only if that word was found, you could LIST a program to it and it would act as a LIST IF... command. Well, this is what I have done. The device is not a hardware device, but is in fact a small machine code program. Due to the way I/O is handled by the Operating System, you can create such a device and arrange for it to have a device string of your choice. I chose a question mark (only the first character is recognized), so that the LIST IF... command is used by typing LIST "?:...". For example, if you wanted to type in LIST IF PRINT as before, you would type in LIST "?:PRINT". This has the limitation that quotation marks cannot be searched for (except in Turbo Basic where you would type in LIST "?:""a""" which would be equivalent to LIST IF "a").

If you read the APRIL/MAY issue of PAGE 6 ATARI USER then you will no doubt have seen or even entered the FINDER utility by Robert De Letter. If so, then you may be wondering why you need another such utility. Well, the command version is obviously easier to use, and it also has the advantage that you can use it on a program in memory, and also use the normal editing commands to edit the lines there and then, rather than having to load the program in from disk to do so. The really good thing about this system is that it is not language dependent, and as long as you can find a safe place in memory for the routine to go, it should work in other languages. In Turbo Basic it has an added use with the DUMP command. You can use DUMP "?:$" to list all strings, DUMP "?:(" to list all arrays, DUMP "?:#" to list all labels, DUMP "?:=" for numerical variables and DUMP "?:PROC" for procedure names. You can check groups of lines in the normal way e.g. LIST "?:PRINT",100,400 and you can still use CONTROL+1 to halt the listing. You can even use the device in your own programs if you find it useful, but you must bear in mind that numbers at the beginning of a string PRINTed to the device will not be checked. This is because when used with LIST if you want to find every occurrence of the number 10 then line 10 should not be included as an occurrence, so the device skips over the line number. Of course, you can always follow Robert's suggestion and convert FINDER to a kind of 'search and replace' program, then the two utilities could complement each other.

The assembly source code of the "?:" handler has lots of remark statements in it so you should be able to follow it fairly easily if you know a bit of machine code and if I give you a little bit more explanation. Device names are stored in a table in RAM called HATABS for Handler Address TABleS. Each entry in HATABS requires three bytes. The first byte contains the device name, which, in our case, is "?", so the ASCII code for "?" is stored in the first byte. The second two bytes point to an address in memory of another table especially for that device, called a VECTOR TABLE. This table gives all the addresses to go to when you perform OPEN, CLOSE, GET, PUT, STATUS, SPECIAL (i.e. XIO commands) and INITitialisation commands. These entries are cleared on RESET, hence the need for RESET protection.

Most of these commands are not needed in our application, and they should return from some of the routines with an error

LIST IF

```
EI 1 REM ********************************
FF 2 REM *           LISTIF             *
TQ 3 REM *   LISTING 1 - ATARI BASIC    *
RR 4 REM *             by               *
XE 5 REM *        S.J. SHEPHARD         *
ED 6 REM * ---------------------------- *
UF 7 REM * NEW ATARI USER - December89 *
EP 8 REM ********************************
AE 9 REM Creates an AUTORUN file which se
   ts up the LIST "?:" command
BF 10 OPEN #1,8,0,"D:AUTORUN.SYS"
FJ 20 READ D:IF D>-1 THEN PUT #1,D:GOTO 2
   0
LJ 30 CLOSE #1
JU 499 REM Header for binary file
FA 500 DATA 255,255,0,30,199,30
UW 999 REM Machine code data
UJ 1000 DATA 160,0,185,26,3,240,8,200,200
   ,200,192,30,208,244,96,169,63,153,26,3
EK 1010 DATA 169,45,153,27,3,169,30,153,2
   8,3,169,0,133,2,169,30,133,3,165,9
IE 1020 DATA 9,2,133,9,96,60,30,94,30,76,
   30,80,30,94,30,76,30,76,60,30
CU 1030 DATA 96,24,165,36,105,2,133,208,1
   65,37,105,0,133,209,160,1,96,160,146,9
   6
QQ 1040 DATA 0,174,80,30,157,192,30,201,1
   55,240,7,232,142,80,30,160,1,96,162,0
OO 1050 DATA 142,80,30,189,192,30,201,48,
   48,8,201,58,16,4,232,76,103,30,160,0
JA 1060 DATA 189,192,30,201,155,240,224,2
   09,208,240,4,232,76,118,30,200,177,208
   ,201,22
VP 1070 DATA 240,19,201,18,240,15,232,189
   ,192,30,201,155,240,197,209,208,240,23
   3,76,118
MZ 1080 DATA 30,169,9,141,66,3,169,192,14
   1,68,3,169,30,141,69,3,169,1,141,73
ME 1090 DATA 3,162,0,142,72,3,32,86,228,1
   60,1,96,0,0,0,0,0,0,0,0
TK 1094 REM Adjust MEMLO and run program
IO 1095 DATA 255,255,231,2,232,2,0,32
LR 1100 DATA 255,255,226,2,227,2,0,30
EJ 1110 DATA -1
```

LISTING 1 - ATARI BASIC

```
EI 1 REM ********************************
FF 2 REM *           LISTIF             *
SR 3 REM *   LISTING 2 - TURBO BASIC    *
RR 4 REM *             by               *
XE 5 REM *        S.J. SHEPHARD         *
ED 6 REM * ---------------------------- *
UF 7 REM * NEW ATARI USER - December89 *
EP 8 REM ********************************
LA 9 REM Creates file for AUTORUN.BAS
ME 10 OPEN #1,8,0,"D:LISTIF.OBJ"
FJ 20 READ D:IF D>-1 THEN PUT #1,D:GOTO 2
   0
LJ 30 CLOSE #1
QQ 499 REM Binary file header
FA 500 DATA 255,255,0,30,199,30
UW 999 REM Machine code data
UJ 1000 DATA 160,0,185,26,3,240,8,200,200
   ,200,192,30,208,244,96,169,63,153,26,3
EK 1010 DATA 169,45,153,27,3,169,30,153,2
   8,3,169,0,133,2,169,30,133,3,165,9
IE 1020 DATA 9,2,133,9,96,60,30,94,30,76,
   30,80,30,94,30,76,30,76,60,30
CU 1030 DATA 96,24,165,36,105,2,133,208,1
   65,37,105,0,133,209,160,1,96,160,146,9
   6
QQ 1040 DATA 0,174,80,30,157,192,30,201,1
   55,240,7,232,142,80,30,160,1,96,162,0
OO 1050 DATA 142,80,30,189,192,30,201,48,
   48,8,201,58,16,4,232,76,103,30,160,0
JA 1060 DATA 189,192,30,201,155,240,224,2
   09,208,240,4,232,76,118,30,200,177,208
   ,201,22
VP 1070 DATA 240,19,201,18,240,15,232,189
   ,192,30,201,155,240,197,209,208,240,23
   3,76,118
MZ 1080 DATA 30,169,9,141,66,3,169,192,14
   1,68,3,169,30,141,69,3,169,1,141,73
ME 1090 DATA 3,162,0,142,72,3,32,86,228,1
   60,1,96,0,0,0,0,0,0,0,0
US 1099 REM Autorun program
LR 1100 DATA 255,255,226,2,227,2,0,30
EJ 1110 DATA -1
```

LISTING 2 - TURBO BASIC

message. You do this by loading the Y register with a 1 for no error at all, or the error number if there is to be one (in our case error-146 during PUT and SPECIAL commands). The only commands that have been used are the OPEN command and the PUT command. The OPEN command simply finds the address in memory of the string you are searching for e.g. in LIST "?:PRINT" it finds the address of PRINT in memory. It can do this because on OPEN commands the address of the whole device string is stored in two locations, and the search string is simply two bytes along from this. It then has to store this location in two zero page addresses and return. The PUT routine contains the crux of the program. The program line is listed to this routine one byte at a time, which is transferred via the Accumulator. Each byte is then stored in the line buffer until the end of the line (signified by a RETURN character) has been reached. When this happens, the program checks the search string against the program line. If the end of the search string (signified by two different characters depending on how the device is used, so both must be checked for) is reached then it has been found and the line is printed. If the end of the line is found first then the line is not printed. And that's all there is to

ASSEMBLY SOURCE LISTING OVERLEAF

it! The starting address can be changed to suit your language, and if you have a disk system with Atari Basic or a Turbo Basic system then you can just type in the Basic listings given.

If you want to read more about the Atari's central input/output system or how to write device handlers, you can find information in MAPPING THE ATARI (HATABS is at 794) or in ATARI USER (vol.2 9-12, especially vol.3 no.2, and also vol.3 3-5). RESET protection is explained in ATARI USER vol.1 no.4. You can also try looking up all the locations used in the assembly listing in a copy of MAPPING THE ATARI. All the ATARI USERs mentioned are unfortunately now out of print, but you may be able to get them through CONTACT if you don't already have them. MAPPING THE ATARI may be available from the PAGE 6 ACCESSORY SHOP, as is Turbo Basic, so buy it now and shut those insufferable Beeb owners up with pointed remarks about programming environments or the lack of!

LIST IF ASSEMBLY SOURCE CODE

```
1 ; LIST IF Source code
2 ; NEW ATARI USER
3 ; December/January 1989
4 ;
10  *=7680;start address
20 ;change as necessary
30 SET;set up device handler
40  LDY #0;and RESET protect it
50 NEXT
60  LDA $31A,Y;LoaD Acc. with HATABS
70  BEQ FOUND;branch when space found
80  INY;skip 3 bytes in
90  INY;HATABS and go
100  INY;on to next entry
110  CPY #30;last entry?
120  BNE NEXT;no-check again
130  RTS;yes-no space free
140 FOUND;free space in HATABS
150  LDA #'?;device name
160  STA $31A,Y;store in HATABS
170  LDA #VECT&255;address of vector
180  STA $31B,Y;table for device
190  LDA #VECT/256;handler is stored
200  STA $31C,Y;in HATABS
210  LDA #SET&255
220  STA 2;RESET vector set to set-up
230  LDA #SET/256;routine at beginning
240  STA 3
250  LDA 9
260  ORA #2;set for cassette boot
270  STA 9
280  RTS;RESET protect and return
290 ;handler vector table
300 VECT
310  .WORD OPEN-1
320  .WORD RET-1;skip CLOSE
330  .WORD ERR-1;no GET
340  .WORD PUT-1
350  .WORD RET-1;skip STATUS
360  .WORD ERR-1;no SPECIAL
370  JMP INIT
380 INIT
390  RTS; just return
400 OPEN;open file routine
410  CLC
420  LDA 36;find address of device
430  ADC #2;string and add 2 to it
440  STA 208;to get to beginning of
450  LDA 37;string to be found
460  ADC #0
470  STA 209;store in 208,209
480  LDY #1;OK
490  RTS
500 ERR;error routine
510  LDY #146;fnctn not impl. error
520  RTS
530 INDEX
540  .BYTE 0;record of index
550 PUT;PUT one byte routine
560  LDX INDEX
570  STA BUFF,X;store line in buffer
580  CMP #155;at end of line?
590  BEQ CKST;yes-check line
600  INX;no-add one to index
610  STX INDEX;and carry on
620 RET;return
630  LDY #1;OK
640  RTS;
650 CKST;check line for string
660  LDX #0;get to start of line
670  STX INDEX;reset index
680 SKIP
690  LDA BUFF,X
700  CMP #48;check start of line
710  BMI NXC1;if there is a line
720  CMP #58;number , then skip
730  BPL NXC1;the line number
740  INX
750  JMP SKIP
760 NXC1
770  LDY #0;start of check string
780  LDA BUFF,X
790  CMP #155;if end of line and no
800  BEQ RET;string found , return
810  CMP (208),Y;else compare with
820  BEQ NCHK;string and check again
830  INX;if the first char.is found
840  JMP NXC1;next place in line
850 NCHK;check next string char.
860  INY
870  LDA (208),Y
880  CMP #22;end of check string?
890  BEQ PRINT;yes-print line
900  CMP #18;end of check string?
910  BEQ PRINT;yes-print line
920  INX
930  LDA BUFF,X
940  CMP #155;end of line?
950  BEQ RET;yes-return
960  CMP (208),Y;compare next char.
970  BEQ NCHK;of string
980  JMP NXC1;no-start string again
990 PRINT;print line
1000  LDA #9;print mode
1010  STA 834;set text editor to
1020  LDA #BUFF&255;print data in
1030  STA 836;the line buffer ,
1040  LDA #BUFF/256;until a
1050  STA 837;RETURN is reached
1060  LDA #1;or 256 characters
1070  STA 841;have been printed
1080  LDX #0;(over estimate)
1090  STX 840;N.B. #0 is editor
1100  JSR $E456;carry out print
1110  LDY #1;OK
1120  RTS;return
1130 BUFF;line buffer starts here
1140  BRK;256 bytes are needed
1150 ;whole routine & buffer fits
1160 ;into two pages (512 bytes)
```

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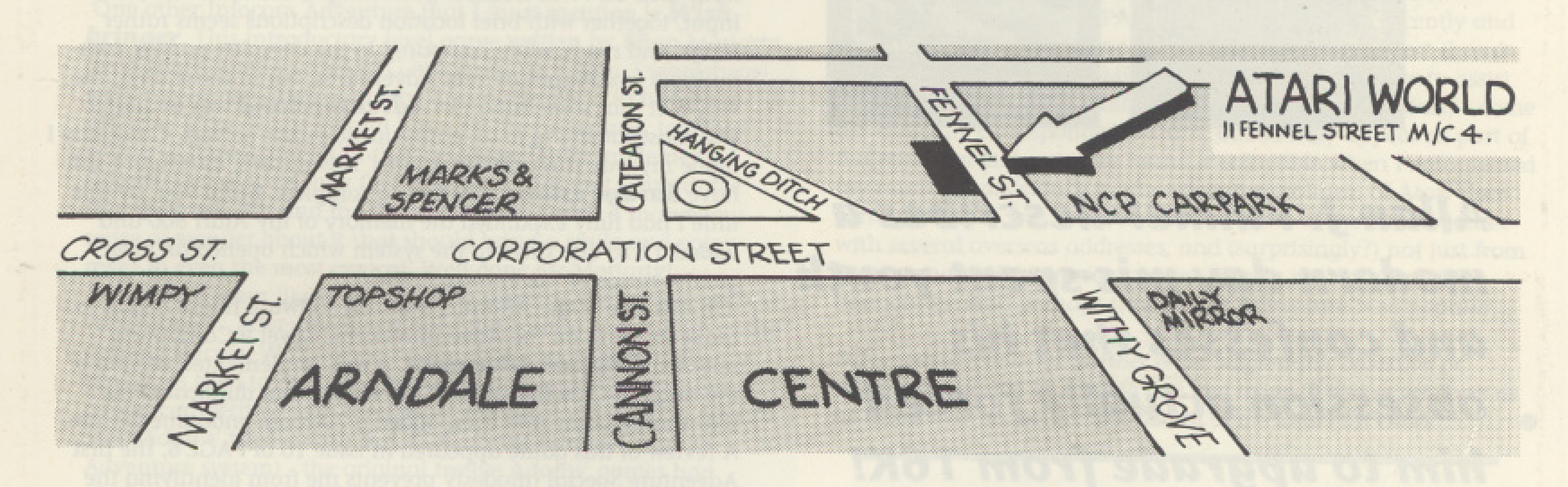
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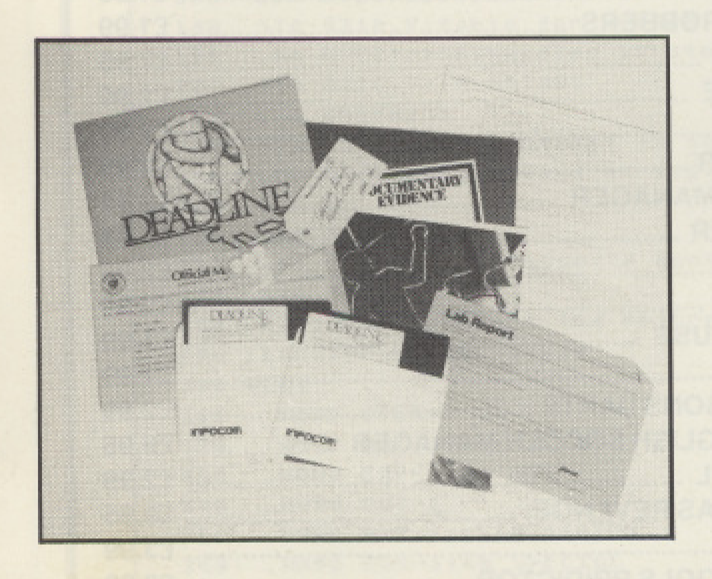
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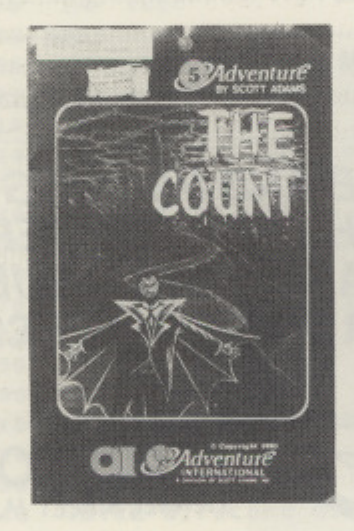


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CONFESSIONS OF AN ADVENTURE ADDICT







Allan J. Palmer describes a modern day mis-spent youth and confesses that his obsession actually forced him to upgrade from 16K!

What makes Adventure games so popular? Why are games like ZORK and The Pawn such big sellers in the computer software field? There is no denying the impact that Adventure has had on the home microcomputer. PAGE 6 has featured articles/reviews on more than 50 different Adventures in its first 33 issues. These 'confessions of an Adventure addict' reflect my thoughts on how Adventures have grown since the coming of the microcomputer.

I have always had a suspicion that the real catalyst that made the home microcomputer revolution take off in the early 1980's was the lure of Adventure. All those programmers, who were playing the original ***Colossal Cave Adventure*** (by Crowther and Woods) and ***Dungeon*** (by M.I.T's Zork creators) on their university or company mainframe just had to have more of the same stimulating puzzles that the Troll and the Cyclops presented. Certainly, I freely admit that Adventure was one of the reasons why I first contemplated purchasing a home microcomputer, especially after reading descriptions of available micro-Adventure games in issues of the American magazine, Creative Computing.

Well, when I did purchase my first microcomputer (an Atari 800 - yes, I have owned and enjoyed an Atari for some time), it was not long before the first Adventure was added to my software library. This was after the memory upgrade, of course - for you newcomers out there, the Atari 800 was originally only supplied with 16K RAM, and you could purchase additional 16K RAM modules to bring it up to 48K! The Scott Adams' Adventures required 24K on the Atari, so the purchase of extra RAM was necessary. At that time, Scott Adams was the star of the computer Adventure scene, having created a line of Adventure games that were available on a wide range of micros.

The first Adventure that I played was ***Pirate Adventure***, and from then on I was hooked. In hindsight, the basic verb/noun input, together with brief location descriptions seems rather rough and ready when compared to the complex parsers with multiple word input of later Adventures, but in those days, the very fact that something like ***Adventureland*** was available was most satisfying to all enthusiastic puzzle solvers. Gradually I made my way through the Adams' Adventures, although I still have ***Savage Island Part II*** to complete. Mind you, by this time I had fully expanded the memory of my Atari 800 and added a 810 disk drive to the system which opened an even greater range of Adventures to me.

On this side of the Atlantic, a British software house began to make its mark on the Adventure scene. Level 9 Computing released ***Colossal Adventure***, a well implemented version of the original Crowther-Woods Adventure that duplicated the mainframe game and even added a 70-room endgame feature. A review of this game appeared in issue 10 of PAGE 6, the first Adventure Special (modesty prevents me from identifying the reviewer!). Where Level 9 scored over the Adams' games was their capability of compressing text in such a way that location descriptions ran over several lines (in some cases a full screen). This greatly enhanced descriptive element added more atmosphere to the game, which in turn enhanced the enjoyment and playability. At that time, it was not known how extensive Level

9's Adventure range would become in the future.

The name of Infocom was already legend as the software house responsible for ZORK, the next step up in Adventures. Available only on disk, thus not constrained by memory limitations like the cassette based Adams' games, Infocom Adventures enjoyed a greater depth. Whereas you could map ***Adventureland*** or ***Ghost Town*** on one or, at most, two A4 sheets of paper, with Infocom games it was generally a good idea to have two or three sheets of A3 paper available.

When I went to purchase my first Infocom, the shop did not have ***ZORK I*** in stock (a sign of its popularity), so my first exposure to Infocom was trying to solve the locked room murder mystery in ***Deadline***. I have to admit that this game still remains one of my favourites, even now. Perhaps being a fan of detective fiction makes me biased, but the detail, ability to interact with other characters, and the possible outcomes have always endeared this game to me. If you have not played Deadline, I urge you to give it a try. I believe that recent versions correct the bug that I encountered on my earlier version - under certain circumstances, it is possible for a second body to be found, then if particular actions are taken, a living counterpart of the body appears and shortly thereafter (not surprisingly) the game locks up and crashes.

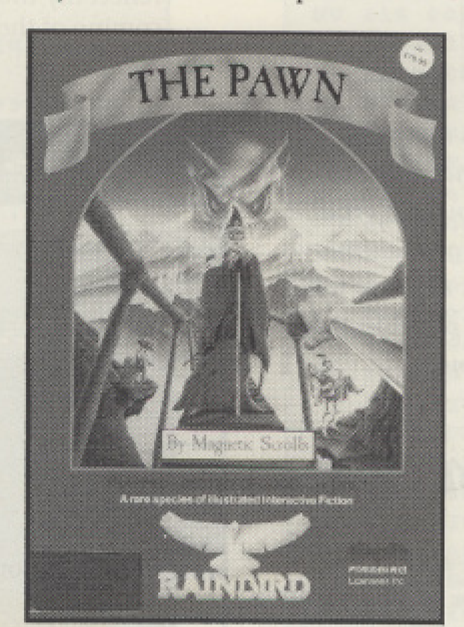
The scale of Infocom adventures, their originality and subtle humour ensured that more of their products were added to my growing collection of Adventure software. I played the ZORK trilogy and found that ***ZORK II*** appeared the most difficult, although review tended to suggest the final part as being the hardest to crack. Outer space beckoned aboard the ***Starcross***, and the bizarre science-fiction/humour combination of Douglas Adams led to the infamous ***HitchHikers' Guide to the Galaxy***. I must admit that I always felt that HitchHikers'... was a bit too linear for my liking, you seemed to have to complete set puzzle one, before moving on to set puzzle two, before moving on etc. I much prefer Adventures where you can attack puzzles from more then one direction, or where you are not totally hampered from moving because there is only one direction to go in. ZORK was most enjoyable because of the number of different areas available for exploration.

One other Infocom Adventure that I must mention is ***Wishbringer***. This introductory level game written by Brian Moriarty (who contributed to ANALOG magazine) is a gem. I wholeheartedly recommend this to novice Adventurers and to hardened veterans alike. It has helpful hints for the newcomer, together with a well structured plot that is so excellently implemented. Experienced players may find the game easy, but I guarantee that they will still find the story compelling with a marvellous sense of wonder about it that should bring a smile and enjoyment to even the most cynical. Well done Mr Moriarty!

This would seem like a good time to mention the subject of 'Text vs. Graphics'. Adventures exploited the textual capabilities of the original micros. With increased graphics capabilities, software producers tried to make the apparent dull looking Adventure games competitive with the flashy, multi-coloured shoot-'em-ups. Scott Adams' tried it with ***S.A.G.A.*** (Scott Adams Graphics Adventure system) - the original twelve Adams' games had pictures added for each location, but this did little to really enhance the product. As you may guess from my tone, I support the text-only school and share a view popularised by Infocom that pictures are unnecessary when they can be created by the world's greatest microcomputer, i.e the human brain.

I will admit though, that there is one instance where I felt that graphics did work to a limited extent. The abortive ***Questprobe*** series from Scott Adams which utilised characters from the pages of MARVEL Comics seemed a very apposite use of graphics, as the originating medium of the characters and storyline was in itself a pictorial system. Limitations in memory restrict the quality of graphics and this resulted in pictures representative of those appearing in the comic book medium. Note that this is not intended to be derogatory regarding comic book artwork. I have a long standing interest in comic strips and comic books and do feel that in addition to some dross, there is some superb artwork appearing therein. As yet, I do not believe that there is adequate capacity to generate enough pictures of sufficient quality for all locations and situations to actually enhance an Adventure. Current attempts fall short of the mark.

This, almost naturally, brings us on to one of the more recent stars of the Adventure arena, namely ***The Pawn***. I must admit that the presentation, with scrolling screen is quite neat and that the pictures are not bad, but there are so few pictures compared to locations, and some convey little if any detail beyond the text. It does not seem right that after taking an object that is visible in a picture of a location that it still remains there - to enhance the play, the object should be removed from the location!



So, where does this bring us in this ramble through the world of Adventure games? Well, there are plenty of games that I have not mentioned. Back in PAGE 6 issue 10 again, Garry Francis and Les Ellingham produced a list of all known Atari Adventure software - that list ran over two pages of the magazine, I wonder how many pages it would take now, and how many of those software items are still available? Among the ommissions are ***Sierra On-Line***'s offerings, and the ***Mysterious Adventures*** from the coding sheet of Brian Howarth that were another British competitor for the crown of Scott Adams. Somehow, I am sure that Adventures will remain one of the most (if not the most) popular types of software for all types of microcomputers the world over.

Certainly, Adventure has created its own subculture amongst microcomputer enthusiasts. Columns devoted to the subject have been a regular feature of many a microcomputer magazine. Keith Campbell's column in Computer & Video Games appears to have be the one with the most longevity. Garry Francis contributed a column to PAGE 6 from issue 9 until recently and there was once a magazine devoted solely to the subject (hands up those who remember MicroAdventurer?). HelpLines to assist those stuck in puzzles in different games crop up regularly - some are basically correspondence clubs, others may appear as part of Bulletin Boards. I certainly found it enjoyable when I volunteered my name for assistance in the Adventure column of Atari User correspondence was received from all parts of the U.K. together with several overseas addresses, and (surprisingly?) not just from Atari owners - Adventure, it seems ignores machine specific boundaries. And perhaps that is why Adventure is so popular...

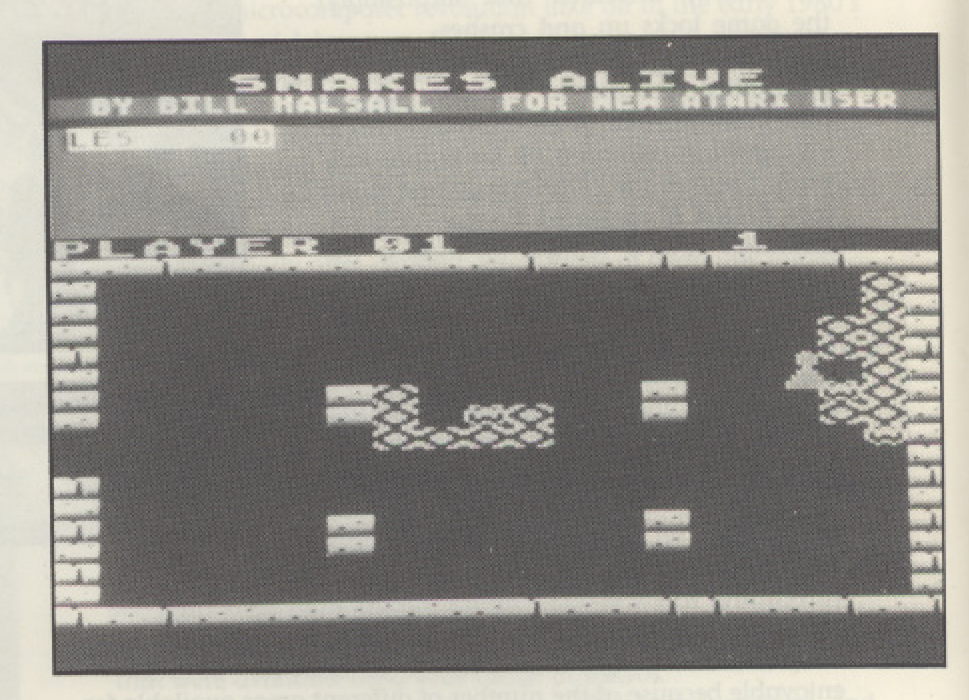
But we never found out whether Allan outgrew this obsession or whether he will still be fighting orcs and trying to find secret doors as he hands over his pension book down at the local Post Office ... ●

Do YOU have a computer obsession that you don't mind airing in public? How about Confessions of a Games Junkie or Confessions of a Hardware Nut or Confessions of a Flight Simulator Fanatic? If you can write it up well and mention the good and bad points of lots of different Atari software or gadgets chances are we'll print it.

Bill Halsall was inspired by a letter in our Mailbag column asking if there were any games for up to twenty players and has come up with the answer. You can't all play at once though!

SNAKES ALIVE!

Fangs ain't what they used to be! The snakes move like lightning, the ladders quickly disappear, and somebody left some mines lying around which blast you into orbit! With a choice of 3 rooms in 50 stockades a good memory also helps! Up to 20 can play in an attempt to get to the 50th and final stockade in the fewest turns possible, this figure being displayed at the end of the game.



PLAYER DETAILS AND GAME PLAY

The game uses a joystick for all data input and movement of playing pieces. To input the number of players and their names move the joystick forwards or backwards to obtain the required number/letter then press the button.

Contestants take turns to play. In your turn press the button to determine the number of possible moves then move the playing piece to the door of the enclosure you wish to enter. Once inside, move the playing piece to the exit to take you to the next stockade. Climbing a ladder will move you up several stockades whilst hitting a snake will drop you down some. Your turn continues until you exhaust your moves, fail to reach a ladder or hit a snake.

Apart from some random enclosures the contents of each remain the same for the duration of a game. The same minefield layout is also used throughout and consists of 4 strips of mines stretching between the outposts with a small gap in each. In a key room touch a key to pick it up then make contact with the portcullis to use it. The correct key varies according to the room.

At the end of the game press the button to play again. Answer the 'same players' question by using the joystick to move the pointer to 'Yes' or 'No' then press the button. Each game is different.

TYPING IT IN

Cassette and disk users should type in Listing 1, SAVE or CSAVE a copy, then RUN the program. The program will check each line of data and inform you of any errors. Correct any errors and RUN the program again until all errors are eliminated. When this is done answer the cassette/disk questions accordingly to create a boot tape or binary disk file.

Cassette users should load the boot tape created by firstly removing all cartridges and then turning on the computer while holding down the START key (XL and XE owners should hold down OPTION as well). Press RETURN and the tape will load and run automatically.

Disk users should type in Listing 2 and save it on the same disk as the binary file created by Listing 1. RUN the Listing 2 program with the disk in the drive and the game will load and run automatically.

SNAKES ALIVE!

```
EI 1 REM ******************************
YZ 2 REM *       SNAKES ALIVE!        *
RQ 3 REM *             by             *
UL 4 REM *        Bill Halsall        *
EC 5 REM * -------------------------- *
UE 6 REM * NEW ATARI USER - December89 *
EO 7 REM ******************************
NN 8 REM
AX 40 REM BOOT TAPE/OBJ CODE FILE MAKER
          BASED ON PROGRAM FROM ANALOG
BH 43 REM
SR 44 DIM DAT$(100),HEX(22):RESTORE 46:FO
   R X=0 TO 22:READ N:HEX(X)=N:NEXT X:PAS
   S=0:TOTAL=0:TRAP 62:? "CHECKING DATA"
PA 45 LINE=99:RESTORE 100
EL 46 DATA 0,1,2,3,4,5,6,7,8,9,0,0,0,0,0,
   0,0,10,11,12,13,14,15
BW 48 LINE=LINE+1:? LINE:READ DAT$:IF LEN
   (DAT$)<>90 THEN 76
BL 50 DATLIN=PEEK(183)+PEEK(184)*256:IF D
   ATLIN<>LINE THEN ? "MISSING";CHR$(253)
   :END
MA 52 FOR X=1 TO 89 STEP 2:D1=ASC(DAT$(X,
   X))-48:D2=ASC(DAT$(X+1,X+1))-48:BYTE=H
   EX(D1)*16+HEX(D2)
GR 54 IF PASS THEN PUT #1,BYTE:NEXT X:REA
   D CHKSUM:GOTO 48
BO 56 TOTAL=TOTAL+BYTE:IF TOTAL>999 THEN
   TOTAL=TOTAL-1000
TS 58 NEXT X:READ CHKSUM:IF TOTAL<>CHKSUM
    THEN 76
VQ 60 GOTO 48
TQ 62 IF PEEK(195)<>6 THEN ? "ERROR ";PEE
   K(195);CHR$(253):END
BY 64 IF PASS THEN RESTORE 90:FOR X=1 TO
   29:READ A:PUT #1,A:NEXT X:CLOSE #1:END
SX 66 ? "(D)ISK OR (T)APE":GOSUB 80:IF K=
   ASC("D") THEN 70
RD 68 ? "READY CASSETTE AND PRESS RETURN"
   :OPEN #1,8,128,"C:":GOTO 74
ND 70 ? "READY DISK AND PRESS RETURN":GOS
   UB 80:IF K<>155 THEN 70
HV 72 OPEN #1,8,0,"D:SNAKES.OBJ"
HW 74 PASS=1:LINE=99:RESTORE 100:TRAP 62:
   GOTO 48
PT 76 ? "BAD DATA";CHR$(253):END
GO 80 CLOSE #1:OPEN #1,4,0,"K:":GET #1,K:
   CLOSE #1:RETURN
GY 90 DATA 47,46,0,41,46,54,204,116,10,84
   ,26,182,158,228,170,58,196,124,6,92,22
   ,186,148,28,68,1,0,0,0
MV 100 DATA 001C00202720A9008D2F02A93C8D0
   2D3A9008DE702850EA9388DE802850FA928850
   AA920850B18604C412D0000,514
RK 101 DATA 00000000000000000000000000000
   A153F2E2420262B311B2E30163D496E0000000
   00000000000000000000000,239
OQ 102 DATA 00EFFDFFFFBFFFFE00FFDFFFFFFDF
   FFF00EFF7F7F7F7F7EFFFFFFFBFFDFFFFFF00D
   DDDDD00FFFFFF00DDDDDDDD,713
KH 103 DATA DDDDDDDD665AFFBDA5815A2466C39
   93C3C99C3665A5A5A5A5A5A5A0705FDE5A70
   0000000183C3C3C18183C,426
VW 104 DATA 3C7E7EFFFFFF000000001C3E55555
   57F557575557F5555557F5500000000736E616
   B657300616C697665000000,147
MG 105 DATA 00000022390022292C2C0028212C3
   3212C2C000000262F32002E253700213421322
   900353325320000703046CE,799
HO 106 DATA 2082304200320202028286C6003A8
   686868686868686868686868686806410A214
   8A9428D0AD48D18D0A93F8D,191
RJ 107 DATA 0002684048AD5C218D16D0AD5D218
   D0AD48D17D0AD5E218D18D0A95F8D00026840E
   8E4E6488A48A207BD74218D,4
MZ 108 DATA 0AD48D19D0CA10F468AA684010121
   406080A0C0AA5C8F008C6C818699F8D03D2A5C
   9F008C6C918698F8D01D2A5,107
DY 109 DATA CAF007C6CA4A4A8D01D2A92F8D000
   2A9218D01024C62E4A9008D2F028D08D2A9038
   D0FD2A9388D07D48DF402A2,953
GM 110 DATA 00BD00E09D0038BD00E19D0039E8D
   0F1BD2B209D0038E810F7A9028D1DD0A90A8D3
   002A9218D3102A208BD0922,575
VQ 111 DATA 9DC002CA10F7A93A8D2F02A07CA22
   1A907205CE4A9C08D0ED46036562A043ACC701
   A00A000A9C999003AC8C8C0,558
AS 112 DATA 14D0F720542299003AC8C0F0D0F5A
   205BD4822A8BD4E2299003A99283A99503A090
   199143A993C3ACA10E5608F,361
GE 113 DATA 9095969B9C0A0A4A4A8A8AAD0AD22
   9031869C660A9008D1A21A93A8D1B21A9E88D5
   C21A9E48D5D21A9E68D5E21,214
VA 114 DATA 60201326A9568D5C21A90085BD8D5
   D218D5E218D04D2A899003499543 4C8D0F7A21
   32054229D00349D4035CA10,650
TJ 115 DATA F4A200A90085CB8D1A21A93485CC8
   D1B21A5CB9D0037A5CC9D1137A00020542291C
   BA01391CBA5CB18691485CB,736
UV 116 DATA 9002E6CCE8E011D0DB60BD003785C
   BBD113785CCA5B591CB60BD003785CBBD11378
   5CCB1CB85B560E6B3A5B329,42
RE 117 DATA 1F85B3D018A90285B22038232048 2
   3A90285B520DA22E6B5E820DA22C6B2D0E9A91
   038E5B3B006290FAA4C2C23,92
YS 118 DATA A6B3A000BD2B20991038E8C8C010D
   0F460AD0AD2291F38E90E90F6A8C860AD0AD22
   90F38E90390F60901AA60AD,476
QA 119 DATA 8402D0FB206423AD8402F0FB60A9A
   88D03D28D02D2A90A85C860E6B3E6B3A5B3290
   6AAA000BD3420991038E8C8,251
OH 120 DATA C018D0F4E018D063A201BD003785C
   BBD113785CCBD013785CDBD123785CEA001B1C
   D91CBC8C013D0F7E8E00FD0,435
GH 121 DATA DCA001B92C35F018C902D008A9039
   92C354CD623C903D008A904992C354CD623A90
   0992C35C8C013D0D9AD0AD2,344
AS 122 DATA 2901D00D203B23B92C35D0F8A9029
   92C3560A90085B5A201A00120DA22C8C013D0F
   8E8E010D0F16020F023A200,432
EU 123 DATA 204524A214204524A207A9059D483
   7A9089D5037A90B9D5837CA10EEA207A00B989
   D30379D38379D403788CA10,570
AK 124 DATA F2A9018D60378D68378D703760A9C
   99D7E349D85349DF6349DFD3460E6B9A5B9290
   3D0E8A90085B5AE4F37AC37,305
CG 125 DATA 3720DA22AE5737AC3F3720DA22AE5
   F37AC473720DA22A22EBD30379D3137CA300B8
   A2907C907D0F0CA4C7D24A9,912
MX 126 DATA 0085B2AAA90D85B5BD3037A8BD483
   7AA20DA22E6B2A6B2E018D0EDA90085B2A6B2B
   D603785B4BD3037A8BD4837,817
ZH 127 DATA AAAD0AD22907C5B4F0F785B6C900F
   01BC901F013C902F017C903F007A5B449034CC
   924E84CEF24C84CEF24CA4C,599
RO 128 DATA EF248820E922A5B538E90EB0B886B
   784B8A90C85B520DA22A6B2A5B79D4837A5B89
   D3037A5B649039D6037A5B2,389
OS 129 DATA 18690885B2C918D08F60E6B9A5B92
   901F0F7A5B3C90FF027A90385B2A4B2301CB97
   137A8A6B3F007A90E85B520,185
VM 130 DATA DA22E8A90C85B520DA22C6B24C352
   5E6B36020F023A90085B3A203203B23989D713
   7CA10F64C2325205729A00C,995
IP 131 DATA A20120542285B520DA22E8E00DD0F
   3C8C00ED0ECA006A20320542285B520DA22E8E
   010D0F320FF25AD0AD22907,443
```

continued ☛

SNAKES ALIVE!

```
YQ 132 DATA 38E90290F6AABDD725A41484B6100
   31869308D01D085B8BDDD25AAA000B93B209D0
   03DE8C8C010D0F4A93085B3,988
AB 133 DATA AD0AD22901A8C884B960303060609
   89870A078A880ACA5B3F0B1A6B9A5B61005C6B
   84CF425E6B8C6B3CAD0F0A5,481
GY 134 DATA B88D01D060A2008A9D003DE8D0FA6
   0A2008A9D003FE8D0FA60A2008A9D003C9D003
   D9D003E9D003FE8D0F160A9,841
KP 135 DATA 00AA9D003CE8D0FA60AD780285BAA
   5BA2901D003205A26A5BA2902D003206626A5B
   A2904D003207226A5BA2908,360
RL 136 DATA D003207E2660A4B1C05AF0F98884B
   14C8726A4B1C0C8F0EDC884B14C8726A4B0C02
   DF0E18884B04C8726A4B0C0,904
PD 137 DATA C2F0D5C884B0A200A4B1BDA820990
   03CC8E8E016D0F4A5B08D00D060207722A201A
   00220542285B520DA22E8E0,794
BB 138 DATA 0DD0F3204228A9388D02D0A258A94
   29D003EE8A97E9D003EE8E0D4D0F086BFADD82
   685C0A9018D6F026005C6C0,530
LJ 139 DATA D016ADD82685C0C6BFA6BFA9009D0
   03EE058D00485C7E6BD60209D26A9C685B54C0
   527209D26A98685B5A91985,216
MN 140 DATA B2202E2720382720DA22C6B2D0F3A
   90085B5A201A01120DA22C820DA22E8E005D0F
   28D1ED060AD0AD2290F1869,304
ZW 141 DATA 03A860AD0AD2290FF0F9AA60A003A
   D0AD2290F38E90490F61869019975378810EDA
   200AD0AD2290F38E904B002,996
MP 142 DATA A90B9D0031E8E0C4D0ECA9049D003
   1E8E0C8D0F8A200AD0AD2290738E90290F6F0F
   49DC831E8E032D0ECA23186,438
HG 143 DATA BB18AD0AD22907690365BBC932300
   2A9319D9437AD0AD209F838E9031865BBB002A
   9009DC637CA10D6A9328DC5,365
FQ 144 DATA 37A2008A9D8037BDE32B186908A8A
   900990032C8990032E8E014D0E885CF60209D2
   6A94685B5A201A00620DA22,344
NE 145 DATA C8C8C8C012D0F6E8E010D0EFA9008
   5B2A006A90085B5A6B2BD7537AA20DA22E820D
   A22E820DA22E820DA22A9C9,733
TE 146 DATA 85B5A20120DA22A20F20DA22C8C8C
   8E6B2C012D0D060209D26A90F85B5A010A2022
   0DA22E8E8E8E011D0F660A9,690
NH 147 DATA 5E85B1A9C085B08D1ED04C8726AD0
   4D0290CF015A5BA490F85BA2035268D1ED0A96
   48D00D2A90A85C960AD04D0,965
QY 148 DATA 2901D007AD0CD02902F01CA6BBBDC
   63785BBE6BDA2A88E05D28E04D220162DE8D0F
   78E05D286C760AD0CD02904,513
GN 149 DATA F02EA6BBBD943785BBE6BDA9A88D0
   1D2A6B18AE9508D00D2A000B9013C99003CC8D
   0F720162DCAE051D0E7A900,605
BY 150 DATA 8D01D260A5B0C930D004E6BDE6BB6
   0201326205D22A9018D6F02A98085B0A9C085B
   12087268D1ED0A5C7D02E20,970
SK 151 DATA 5623A208A9A88D01D2A9438D00D22
   0162D8D01D220162DCAD0EAAD0AD22907F0F9C
   907F0F585C71869D08DD732,429
NX 152 DATA 2050282030262016 2DAD04D02907F
   0F0A2032903F0062901F001CACA86BC60A6C1B
   D803785BB4CB82BA5BBA6C1,336
WK 153 DATA 9D80374CB82B207722A9208DA0348
   DB434204228A9048D6F020A8D05D260A5BB0A0
   A1865BCAABD0031D00CAD0A,614
WK 154 DATA D2290F38E90430F6F0F485BE0AAAB
   D9A2985CBE8BD9A2985CC6CCB000000C029CE2
   9DC29ED29FF290D2A1E2A27,919
XW 155 DATA 2A382A4F2AB229205729205A2AA5B
   D8D05D2F0F660205729207123205A2AA5BDF0F
   66020572920F822205A2AA5,258
TY 156 DATA BDF0F6602057292006242054242 05
   A2AA5BDF0F6602057 29A90F85B3202325205A2
   AA5BDF0F660206E2520E325,850
OI 157 DATA 205A2AA5BDF0F660209D2620F426A
   02D20E22688D0FA4C522A209D2620FE264C522
   A209D2620DB2720692A2078,385
WQ 158 DATA 2AA5BDF0F660209D26202C2820FE2
   A209F2A20D92A20692AA5BDF0F360209D26206
   92AA5BDF0F960206D282050,308
GY 159 DATA 2820302620CE284C162D20D926205
   0282030262098284C162DAD04D02902F01FE6B
   DA91F8D00D2A93C85CAC6B1,419
VU 160 DATA 208726A5B1C9F8D0F5202626A5CAD
   0FC85C760A5C2D030AD04D02901F029206423A
   200A5B138E9699010E91890,180
MW 161 DATA 0BE9189006E9189001E8E8E8E8E88
   6C2CABDD42AAAA9009D383460003C78B4F0AD0
   CD02908F01D206328A6BBBD,857
JF 162 DATA C831C5C2D003200926A94885B08D0
   0D08D1ED0A90085C260A20FBDBE209DC43FCA1
   0F7A90085C2A9408D03D060,303
QY 163 DATA 20812B201326A213BD6D2B9DC832C
   A10F7ACFC2D20942BA5C58DDA32A5C68DDB32A
   CFC2D208C2B202E2CA9D08D,550
NZ 164 DATA 00D0AD7802C90EF00CC90DF012AD8
   402F0174C342BC014F0DBEEFC2D4C242BC001F
   0D1CEFC2D4C242B20562360,643
GR 165 DATA 2E352D222532002F2600302C21392
   532331D1010A213A9009DC832CA10FA60A9058
   D1C024C1B2DA91085C485C5,32
JB 166 DATA 85C6C000F017A203CAF6C4B5C4C91
   AD008A91095C4E000D0EF884C9C2B6020052CA
   4BB20942BA6C1BDE32B1869,757
PS 167 DATA 08AAA5C59D0032E8A5C69D0032A00
   9BD003209809D0032CA88D0F460000A141E283
   23C46505A646E78828C96A0,304
WO 168 DATA AAB4BEA2C8BDFF31297F9DFF31CAD
   0F56020812BA207A9009D0039A9209DD232BDC
   12C9DC832CA10EDA4C1C820,330
QL 169 DATA 942BA5C58DCF32A5C68DD03260A20
   7BDE0389D503CCA10F7ADC00249048DC00260A
   90085C120052CA00A980A0A,332
OY 170 DATA 0A1869388D00D0202E2C208C2BAD7
   802C90EF00CC90DF01CAD8402F02B4C4B2CB9C
   83218690199C832C93BD0D0,886
LW 171 DATA A92099C832D0C9B9C83238E90199C
   832C91FD0BCA93A99C832D0B5205623C00FF00
   3C8D0ABA6C1BDE32BAAA000,4
ZS 172 DATA B9D2329D0132E8C8C006D0F4E6C1A
   5C1CDFC2DF0034C462C60302C2139253200002
   0812BA212BD032D9DC832CA,50
NJ 173 DATA 10F7201326A9B08D00D085C3202E2
   CAD8402F017AD7802C90BD0034CDA2CC907D0E
   AA9C88D00D085C3D0E14C5E,471
EC 174 DATA 2333212D2500302C213925323300 3
   92533002E2FA9018D1C02AD1C02D0FB854D60A
   90085CBA8A23186CC91CBC8,309
BI 175 DATA D0FBE6CCE8E040D0F499B000C8C02
   0D0F860202 32D20122220AC21205D2220132B2
   0422C204127A200E6CF86C1,369
WC 176 DATA BDE82D8DC00220F72BA90085C7204
   32920D928206F29204D29A9008D05D2A5BBC93
   2F015A5C7F006C6C7F002D0,602
SX 177 DATA DFA6C1E8ECFC2DD0C84C562DA9A88
   D03D2A93C85B2C6B220F72B208C2B20B82B208
   C2BA5B28D02D2D0EB8D03D2,675
OA 178 DATA A205BDE22D9DD232CA10F7A4CF209
   42BA202B5C49DD932CA10F820562320C92CA5C
   3C9B0D0034C532D4C412D37,32
```

```
QP 20 REM ***     SNAKES ALIVE     ***
          *** LOAD AND RUN ROUTINE ***
FY 24 OPEN #1,4,0,"D:SNAKES.OBJ"
ON 26 POKE 850,7:POKE 852,0:POKE 853,32:P
   OKE 856,255:POKE 857,255
TB 28 X=USR(ADR("hhh*LVd"),16)
BO 30 CLOSE #1:X=USR(8232)
```

Listing 2

520ST-FM SUPER PACK



The Atari Super Pack is ideal for you if you want to get off to a flying start with the best in entertainment software. The Pack includes a 520ST-FM with ½Mb RAM, a built-in 1Mb disk drive, over £450 of top games and a joystick. If you buy the Super Pack at Silica Shop, we will add our own ST Starter Kit (worth over £200), Free Of Charge. Return the coupon for details.

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ATARI ST

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The range of Atari ST computers offers something for everyone. From the games enthusiast who wants the challenge of the very best in arcade action, to the businessman who wants to make financial forecasts or faultless presentations. The ST offers high quality graphics, sound and speed for the gamer, whilst providing a fast, user friendly and affordable solution to business. The ST is now firmly established in the home environment and boasts a wealth of users in education, local government, television, and a variety of different businesses. Software for the range stretches to cover applications as diverse as ENTERTAINMENT, ACCOUNTS, ART, COMMUNICATIONS, COMPUTER AIDED DESIGN, DATABASES, DESKTOP PUBLISHING, EDUCATION, MUSIC, PROGRAMMING, SPREADSHEETS, WORD PROCESSING and more. For a full list of the software available, as well as details of the ST range, complete and return the coupon below.

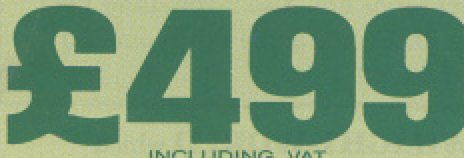
All prices correct at the time of going to press. E&OE.

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NOW WITH TV MODULATOR

For the serious home user and the small business, we are pleased to announce a new package based around the 1040ST-FM. The 1040ST-FM has 1Mbyte RAM and a 1Mbyte built-in disk drive. In addition, the 1040ST-FM now comes with a TV modulator built-in. (The previously available 1040ST-F was designed for use with a monitor only and did not come with a modulator.) This modulator allows the 1040ST-F to be plugged directly into any domestic TV set, and comes complete with a lead to allow you to do so. The new 'Professional Pack' from Silica includes the new 1040ST-FM with modulator plus four high quality software packages including a spreadsheet, database, word processor and programming language. This 'Professional Pack' software will enable you to get straight down to business with your new computer. In addition to this software (worth £384.84), if you buy the Professional Pack from Silica Shop, you will also receive the Silica ST Starter Kit (worth over £200), Free Of Charge. Return the coupon for further information.





£499
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£260

ONLY £2.51 PER WEEK — RETURN COUPON FOR DETAILS

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Desktop Publishing (DTP) is one of the fastest growing applications for personal computers. We are pleased to announce a powerful low cost package for the Atari ST called PageStream. PageStream costs only £149 (+VAT=£171.35) and, because it works with an Atari 1040ST and a Seikosha SP-180AI printer, you can be up and running with a complete system for less than £1000. Some of the features of PageStream are listed to the right. If you would like further information on this program, complete and return the coupon below, ticking the 'DTP' box in the corner.

* TEXT-FLOW AROUND GRAPHICS
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* TAG FUNCTION
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* GROUPING OF OBJECTS

WHY SILICA SHOP?

Before you decide when to buy your new Atari ST computer, we suggest you consider very carefully WHERE you buy it. There are MANY companies who can offer you a computer, a few peripherals and the top ten selling titles. There are FEWER companies who can offer a wide range of products for your computer and expert advice and help when you need it. There is ONLY ONE company who can provide the largest range of Atari ST related products in the UK, a full time Atari ST specialist technical helpline and in-depth after sales support, including free newsletters and brochures delivered to your door for as long as you require after you purchase your computer. That one company is Silica Shop. We have been established in the home computer field for ten years with an annual turnover in excess of £8 million and can now claim to meet our customers requirements with an accuracy and understanding which is second to none. But don't just take our word for it. Complete and return the coupon below for our latest literature and begin to experience the Silica Shop specialist Atari service.

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Do you already own a computer
If so, which one do you own? ....

DTP ☐



Welcome to another episode of Atari game help. Adventurers will be pleased to learn that me ol' mate Garry Francis has returned so all you lamplighters would do well to heed his words elsewhere - his pet 'roo has swiped all my adventure material as it is!

ANSWERS GALORE!

One of the problems highlighted in the last issue was put forward by Andrew Firby regarding his copy of **ACE OF ACES**. According to Richard Humphries of Wallasey, the solution is quite simple. While on the STATUS screen, DO NOT press the joystick fire-button as this resets the game! Instead, press the 'START' button and you will be returned to the Practice/Mission screen and no more loading will be necessary! Richard goes on to help Simon Gildea progress beyond the crossroads in **LOS ANGELES S.W.A.T.** At the Crossroads, walk slightly to the LEFT. When the first grenade is thrown, walk to the RIGHT and WAIT for another, then immediately walk to the LEFT and fire forwards. Carry on doing this until the hostage is brought out, then walk to the RIGHT-hand side of the road. Position your character so that his left shoulder is EXACTLY level with the LEFT-hand edge of the paving stone (third from the left). Carry on firing forwards to kill the 'baddie'.

Andrew C. Thompson pleaded for a map of **CHIMERA** .... and in drops our own Paul Rixon (read the 8-bit reviews, folks!!) with not only a detailed map, but also the solution! Thanks Paul for that. Check out this issue's map.

Although unhappily crumbling to pieces trying to solve **CRUMBLE'S CRISIS**, Dean Chadwick sets his own problems to one side and comes to the aid of Mr. Thompson again in dealing with his other problem with the last scenario of **QUASIMODO**. After placing the second jewel in it's case, you must go through Levels 1 and 2 again before you can get to Level 3. This is accessible from where you found the second jewel. On the 3rd Level, you are scaling the Castle wall, fighting off Guards and Guardians that occasionally pop their heads out of windows - firing arrows or dropping oil. At the top of the Castle wall lies the third and final jewel. (It is NOT necessary to kill ALL the Guards!). Incidentally, Paul Rixon further informs me that there aren't really any tricks to make **CRUMBLE'S CRISIS** any easier for you, Dean - you've just got to be good, and *he* should know!!

A few tips from Paul Brown of Maidenhead, Berks. In **TANK COMMANDER** (a real oldie) just use your tank to move around the screen and collect the agent. Leave all the destroying to your airstrike. This way there is little chance of losing. In **THRUST** on the levels with invisible caves, activate your tractor beam and you can see them! You can skip rounds in **WINTER WALLY** by pressing SELECT on the title screen. The level you begin at is shown at the top of the screen. Last one is **THE EXTIRPATOR** where you can press SPACE to toggle between long and short range fire. Also if you allow the music to play once then press RESET, the game will begin and you have music all the way through!

A fairly recent release is **TWILIGHT WORLD** which Christoper Purveur of Aylesford, Kent has been playing. Are you stuck trying to go through false exits? Well, every screen with false exits has the REAL exit at the bottom so, on Screen D go as far as possible to the RIGHT, then right DOWN to the bottom. On Screen J go to the TOP line and then RIGHT until you collect a KEY. Now go DOWN to the bottom then LEFT and open the 5th door. Hey Presto!!

Christopher Bevan of Bristol, offers sound advice for those struggling with **B.C.'s QUEST FOR TIRES** (if anyone else ever bought it!). When you come to the turtles and the fat broad - American slang for 'large round lady'!! - wait until she has swung her club TWICE. When she brings the club down for the SECOND time, jump almost immediately and you will have an easy crossing over the turtles. Once you have cleared the cliff (you have to be travelling at 80 m.p.h to clear it), the volcanic eruption starts. Move to the far RIGHT of the screen and keep pushing to the RIGHT. Keep your fingers crossed (what, and push right at the same time, Chris?) that a boulder doesn't hit you and, when you come to the turtles at the cave entrance, you will be able to jump whenever you like without drowning or being killed by the Dinosaur .... the rest is easy!!

All the hints and tips this issue came from many different people so we put all the names into one of the Tipster's socks and drew out - Dean Chadwick. The FERRARI's on it's way to you, Dean!
This time we have on offer a super DATABANK WATCH with telephone memory, schedule organiser, calculator, 24 world time zones and much more (it even tells you the time!). This will go to the best collection of hints, tips, maps or cheats to come our way for the next issue so get thinking and writing. The copy date is pretty close for the next one so get your skates on!

QUICKIES!! ... QUICKIES!! ... QUICKIES!! ... QUICKIES!! ...

ROCKFORD (Mastertronic): Press RESET for infinite time on levels! From Michael Daw & Matthew Finch.
OUTRUN (ST version): Type in STARION and you will get loads more time (after completing the first run) from Stuart Short.

CHIMERA

KEY

- (W) WATER
- COMPUTER
- [B] BREAD
- RADIATOR (AVOID WHERE POSS.)
- XF BARRIER – FORCE FIELD
- XP BARRIER – PANDORA'S BOX
- XT BARRIER – TOASTER
- XH BARRIER – HOUR GLASS
- ⊠ LOCKED DOOR
- ✳ SPECIAL OBJECT :–
  1. SPANNER
  2. NUT
  3. KEY
  4. PADLOCK
  5. TORCH
  6. PYRAMID

AND THE SOLUTION

GET SPANNER (E3) - ELIMINATE FORCE FIELDS AT (B3, C4, G5 & B1) - GET NUT (C1) - TAKE TO (F5) BLUE ROOM - GET BREAD (H6) - ELIMINATE TOASTERS AT (G8 & G4) - GET KEY (H4) - ELIMINATE DOORS AT (D1, A5 & F8) - ELIMINATE PANDORA'S BOXES AT (A7, D7, E6 & F7) - GET PADLOCK (G7) - TAKE TO (G6) - GET TORCH (A6) - TAKE TO (G3) - THEN (B6) - GET PYRAMID (G2) - ELIMINATE HOUR GLASS (C7) - GET OBJECT (C6) - TAKE TO (B7) - GO TO (A4).

Chimera is VERY difficult to complete and you must not make any mistakes by taking a longer route than is absolutely necessary. Remember to collect bread and water when needed.

Stephen Wilds of the Anglo Computer Club over there in Pollensa, Mallorca, offers the following tips for devotees of- **STAR RAIDERS II**: 1. The Zylon command ships have a weak spot. Fire at the square in their middle! 2. In need of an urgent re-charge (in the enemy system, for example)? Warp to the star and whilst doing so, press the SPACE bar. When you get there the map will appear. Plot a course to the nearest planet. Wait until you are fully re-charged and GET OUT! (Yes, Stephen, Pippin says you can have Gandalf's old badge - he prefers adventuring anyway!!)

HELP WANTED!!

Solutions, hints or maps for **SPELLBOUND**, **DRUID** and **FEUD** are currently much in demand - as are **CHEATS & TRICKS** for a whole host of the latest Atari games, so if you have progressed well into these games, or found a devious little trick to ease gameplay, please share your success with a few strugglers!!

My sincere thanks to all of the readers who sent in maps and game help recently. Your efforts are appreciated and, space permitting, we will see a Map Special in the very near future. As always send in your hints, tips, maps, cheats and cries for help to

**THE TIPSTER, NEW ATARI USER,
P.O. BOX 54, STAFFORD, ST16 1DR**

Let's be hearing from you!

A TIPSTER EXCLUSIVE!



Every reader sending in NEW hints, tips, cheats, maps etc. to THE TIPSTER will receive an EXCLUSIVE TIPSTER badge! There is no other way you can get one of these badges so get writing now. Share your discoveries with all your fellow Atarians.

SPIRO

by Derek Thomson

SPIRO is one of those fascinating programs that produce beautifully symmetrical patterns on screen that you can watch for hours. Using a Graphics 8 screen SPIRO allows you to input your owns parameters to produce patterns of circles, diamonds and ellipses in different sizes and combinations to produce some excellent drawings.

When you run the program you will be asked whether you wish to centre the drawing on the screen or enter co-ordinates for the screen position. You are next asked for the height and width of the drawing and the shape will then be drawn. Drawing can be stopped at any time by pressing the START key.

If you have a printer and a favourite printer dump routine you can dump out your creations by adding a printer dump routine from line 500 onwards. Provision is made in the program to access this routine by pressing the P key.

Have fun with SPIRO, a nice little program that can provide hours of enjoyment.

```
EI 1 REM ********************************
CE 2 REM *             SPIRO            *
LR 3 REM *               by             *
UE 4 REM *         Derek Thomson        *
EC 5 REM * ---------------------------- *
UE 6 REM * NEW ATARI USER - December89 *
EO 7 REM ********************************
NN 8 REM
NO 9 REM
QT 100 PR=580:REM  START OF PRINTER DUMP IF ANY. CHANGE PR TO START OF YOUR OWN PRINTER DUMP SUBROUTINE 
TR 110 GOSUB 440
PC 120 GRAPHICS 8:DIM A$(1):POKE 710,0:POKE 709,15:POKE 712,0:COLOR 1:POKE 755,1:DEG :X=160:Y=80:GO=1:TRAP 350
LG 130 POKE 16,64:POKE 57344,64
PI 140 OPEN #1,4,0,"K:"
QB 150 ? "↖":? :? "   DRAW FROM CENTER (Y / N)"
GT 160 GET #1,K
RO 170 IF K=89 OR K=121 THEN CE=0:GOTO 200
QM 180 IF K=78 OR K=110 THEN CE=1:GOTO 200
OM 190 GOTO 160
XX 200 IF CE=0 THEN GOTO 280
HX 210 ? "↖":? :? "    ENTER X (5 TO 314) ";:INPUT X:IF X<5 OR X>314 THEN GOTO 200
ZV 220 ? "↖":? :? "    ENTER Y (5 TO 154) ";:INPUT Y:IF Y<5 OR Y>154 THEN GOTO 210
OO 230 ? "↖":? :? "▶    ENTER WIDTH ";:INPUT RR
DI 240 IF X-RR<1 OR X+RR>319 THEN ? "↖":? :? "◙▶▶  TO BIG!":FOR D=0 TO 200:NEXT D:GOTO 230
YN 250 ? "↖":? :? "▶    ENTER DEPTH ";:INPUT R
MF 260 IF Y-R<1 OR Y+R>159 THEN ? "↖":? :? "◙Y TO BIG!":FOR D=0 TO 100:NEXT D:GOTO 250
MP 270 GOTO 300
GS 280 ? "↖":? :? "ENTER WIDTH (1 TO 158) ";:INPUT RR:IF RR<1 OR RR>158 THEN GOTO 280
TW 290 ? "↖":? :? "ENTER DEPTH (1 TO 78) ";:INPUT R:IF R<1 OR R>78 THEN GOTO 290
MJ 300 ? "↖":? :? "▶     ENTER A NUMBER ";:INPUT A
MH 310 PLOT X,Y+R:FOR Z=0 TO 360 STEP 5:DRAWTO X+RR*SIN(Z*A),Y+R*COS(Z*A):Q=Q+1
HG 320 SOUND 0,Q,10,15
ID 330 IF PEEK(53279)=6 THEN Z=360:SOUND 0,0,0,0:Q=0:GOTO 350
BZ 340 NEXT Z:SOUND 0,0,0,0:Q=0
EI 350 ? "↖":? :? "CLEAR SCREEN (Y / N / C OR P)":TRAP 350
GV 360 GET #1,K
NI 370 IF K=89 OR K=121 THEN ? #6;"↖":GOTO 200
XF 380 IF K=78 OR K=110 OR K=32 THEN GOTO 200
DF 390 IF K=67 OR K=99 THEN GOSUB 420:GOTO 360
WM 400 IF K=80 OR K=112 THEN GOSUB PR:GOTO 350
LV 410 GOTO 200
XT 420 IF GO=1 THEN POKE 710,15:POKE 709,0:POKE 712,15:GO=2:RETURN
LI 430 IF GO=2 THEN POKE 710,0:POKE 709,15:POKE 712,0:GO=1:RETURN
YN 440 GRAPHICS 0:DL=PEEK(560)+PEEK(561)*256:POKE 752,1
PJ 450 SETCOLOR 2,0,0
JC 460 POKE DL+6,7:POKE DL+7,6:POKE DL+8,6:POKE 82,0
TW 470 POSITION 7,1:? "SPIRO":POSITION 28,1:? #6;"by":POSITION 5,2:? #6;"d.thomson"
XO 480 POSITION 22,2:? "Spiro will draw different shapes at    any part of the screen. It will draw    stars, ";
JE 490 ? "circles and many other shapes    You can also mix them. When you start you will be asked for the";
LV 500 ? " X, Y   positions this is for the center of    the shape, this will not be asked if    you choose to ";
EW 510 ? "draw from the center   of the screen. Then the width and   height, if you want to stop drawing";
CH 520 ? "    (e.g the shape is going back over   it's self) press START. Once the   shape has been ";
VI 530 ? "drawn you will be   asked if you want to clear the   screen, by pressing Y or N or SPACE.   ";
GS 540 ? "The shapes are drawn white on black.   But if you press C it will change to   black on white. P to ";
IN 550 ? "print.":POSITION 28,21:? "PRESS SPACE TO CONTINUE"
IV 560 IF PEEK(764)<>33 THEN GOTO 560
BB 570 POKE 82,5:RETURN
LI 580 ? "↖":? :? "◙   NO SUBROUTINE FOR PRINTER":FOR D=0 TO 200:NEXT D:RETURN
```

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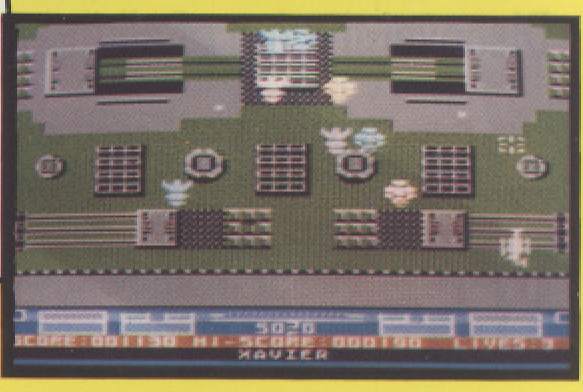
HAWKQUEST

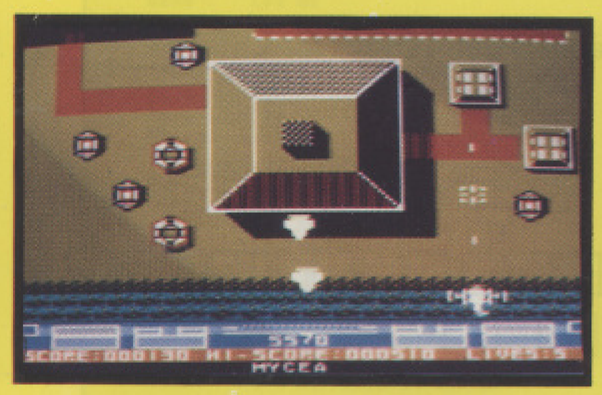
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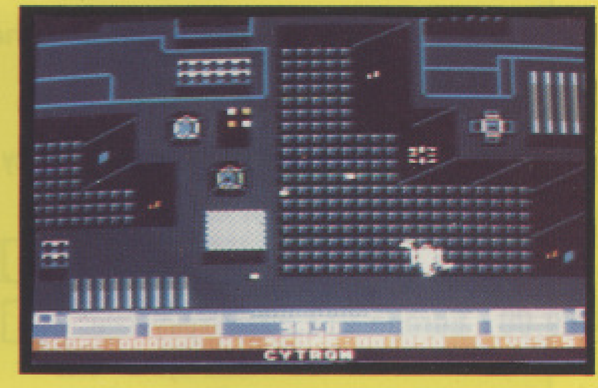
Red Rat

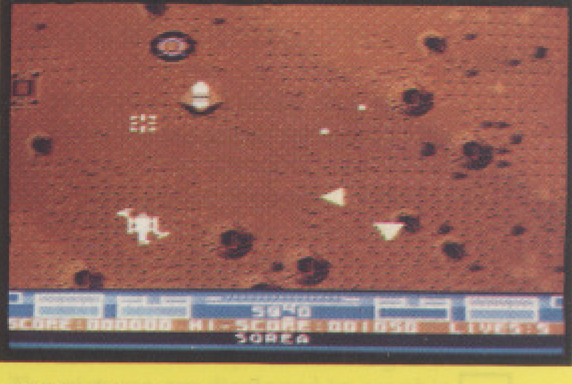
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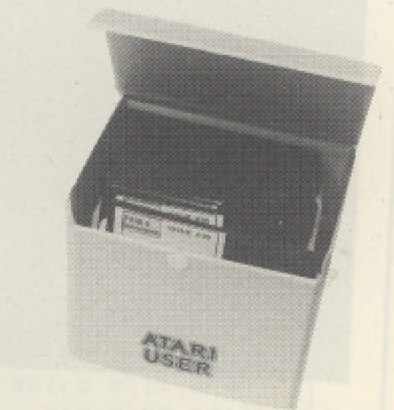
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MACHINE CODE LIBRARY

Part 5 and Stephen Williamson shows you how to add video effects to give you programs some sparkle

```
10 ;--------------------
20 ;MACHINE CODE LIBRARY
30 ;by Steve Willisamson
40 ;for NEW ATARI USER
50 ;PART 5.1 VIDEO EFFECTS
60 ;FADE IN/OUT
70 ;--------------------
80        *=  20000
90        .OPT OBJ
0100 CIO =    58454
0110 COMMAND = 834
0120 BUFFER = 836
0130 BUFFLEN = 840
0140 AUX =    842
0150 AUX2 =   843
0160 COLOR0 = 708
0170 COLOR1 = 709
0180 COLOR2 = 710
0190 COLOR3 = 711
0200 COLOR4 = 712
0210 ;
0220 ;------------------
0230 ;SET GRAPHIC SCREEN
0240 ;------------------
0250 ;
0260      LDX #32
0270      LDA #3
0280      STA COMMAND,X
0290      LDA #8       Clear screen
0300      STA AUX,X
0310      LDA #15      Graphic 15
0320      STA AUX2,X
0330      LDA #NAME&255
0340      STA BUFFER,X
0350      LDA #NAME/256
0360      STA BUFFER+1,X
0370      JSR CIO
0380 ;
0390 ;-------------
0400 ;LOAD PICTURE
0410 ;-------------
0420 ;
0430      LDX #16      Open I/O channel
0440      LDA #NAME1&255
0450      STA BUFFER,X
0460      LDA #NAME1/256
0470      STA BUFFER+1,X
0480      LDA #3
0490      STA COMMAND,X
0500      LDA #4
0510      STA AUX,X
0520      LDA #0
0530      STA AUX2,X
0540      JSR CIO
0550 ;
0560      LDA #176     Set all colours
0570      STA COLOR0   to background
0580      STA COLOR1   colour.
0590      STA COLOR2
0600      STA COLOR3
0610      STA COLOR4
0620 ;
0630      LDX #16      ;Load picture
0640      LDA 88       ;file starting
0650      STA BUFFER,X at top of
0660      LDA 89       ;screen.
0670      STA BUFFER+1,X
0680      LDA #255
0690      STA BUFFLEN,X
0700      LDA #255
0710      STA BUFFLEN+1,X
0720      LDA #7
0730      STA COMMAND,X
0740      JSR CIO
0750 ;
0760      LDX #16      Close I/O
0770      LDA #12      Channel.
0780      STA COMMAND,X
0790      JSR CIO
0800 ;
0810 ;-------
0820 BRIGHTEN
0830 ;-------
0840 ;
0850      LDA COLOR3  Brightest color
0860      CMP #180    first.
0870      BEQ FADE
0880      INC COLOR3
0890 L1   LDA COLOR1
0900      CMP #184
0910      BEQ L2
0920      INC COLOR1
0930 L2   LDA COLOR2
0940      CMP #186
0950      BEQ L3
0960      INC COLOR2
0970 L3   LDA COLOR0
0980      CMP #182
0990      BEQ L4
1000      INC COLOR0
1010      LDY #255
1020 L4   LDX #150
1030 L5   DEX
1040      BNE L5
1050      DEY
1060      BNE L4
1070      LDA #255
1080      BNE BRIGHTEN
1090 ;
1100 ;---
1110 FADE
1120 ;---
1130 ;
1140      LDA COLOR3  Brightest colour
1150      CMP #176    first.
1160      BEQ EXIT
1170      DEC COLOR3
1180      LDA COLOR2
1190      CMP #176
1200      BEQ L6
1210      DEC COLOR2
1220 L6   LDA COLOR1
1230      CMP #176
1240      BEQ L7
1250      DEC COLOR1
1260 L7   LDA COLOR0
1270      CMP #176
1280      BEQ L8
1290      DEC COLOR0
1300 L8   LDY #255
1310 L9   LDX #150
1320 L10 DEX
1330      BNE L10
1340      DEY
1350      BNE L9
1360      LDA #255
1370      BNE FADE
1380 EXIT JMP EXIT
1390 NAME .BYTE "S:"
1400 NAME1 .BYTE "D:PICTURE"
1410      .BYTE 0,0,0,0,0,0,0
```

Listing 1

Video effects are commonplace now in television whether on Top of the Pops or in current affairs programs. Video images are stored in digital form then squeezed, shrunk, moved around and altered in a multitude of ways. This issues machine code library routines explore the world of video effects.

Compared to BASIC, machine code is very fast, but if you want to manipulate whole screens of data at speed then you will find that the 6502 processor at the heart of your Atari is just not fast enough. The Atari ST uses a 68000 processor which does work faster, but if you want to rival Top of the Pops digital video effects then you must first of all rob a bank or sell your house to buy a dedicated digital video effects generator! Despite the limitations of a 64k home computer however, you can still add impressive video effects to your programs to give them that professional touch. These video effects routines are especially useful for title pages or as part of a slide show program.

The source code listings can be used with standard Atari assembler programs such as the Atari Assembler/Editor or MAC/65. They can be used as they are with little or no knowledge of machine code. To use the data versions that are called from BASIC programs requires no knowledge of machine code at all.

USING STANDARD FILES

The routines use standard 62 sector picture files that art programs such as Micropainter or the public domain program Paint use. Atari Artist, the software that comes with the Atari Touch Tablet does not use 62 sector picture files as standard but, in an undocumented option, can save 62 sector pictures by pressing the > key and can load 62 sector pictures using the < key. The pictures are displayed in graphic mode 15.

continued overleaf

```
MU 10 REM ---------------------
NM 20 REM MACHINE CODE LIBRARY
MP 30 REM by Stephen Williamson
KK 40 REM for NEW ATARI USER
NM 50 REM PART 5.2 VIDEO EFFECTS
TB 60 REM BASIC PICTURE LOADER
MF 70 REM ---------------------
MK 80 C0=708:C1=709:C2=710
YL 90 C3=711:C4=712
AY 100 COL0=182:COL1=184:COL2=186
IH 110 COL3=188:COL4=176
CC 120 SCREENBUFF=24900
PM 130 GRAPHICS 15+16
HB 140 REM SET COLOURS TO BACKGROUND COLO
   UR
MW 150 FOR I=0 TO 4
LS 160 POKE C0+I,COL4
GF 170 NEXT I
TH 180 GOSUB 420
DD 190 GOSUB 250:REM DELETE LINE IF NOT U
   SING SCREENRAM LOADER
IG 200 GOSUB 310:REM DELETE LINE IF NOT U
   SING SCREEN BUFFER
CJ 210 GOSUB 390:REM DELETE IF STARTING E
   FFECT WITH COLOURS DOWN
MS 220 GOSUB 500:REM JUMP TO EFFECT SUNRO
   UTINE
BA 230 GOTO 230:REM JUMP TO OTHER ROUTINE
   S FROM HERE
AN 240 REM LOAD PICTURE TO SCREENRAM
DO 250 OPEN #1,4,0,"D:PICTURE"
CM 260 POKE BUFFER,PEEK(88):POKE BUFFER+1
   ,PEEK(89)
KC 270 POKE CMD,7
NU 280 POKE BUFFLEN,255:POKE BUFFLEN+1,25
   5
AP 290 A=USR(ADR(MC$)):CLOSE #1:RETURN
FQ 300 REM LOAD PICTURE TO BUFFER
DH 310 OPEN #1,4,0,"D:PICTURE"
PF 320 HIBYTE=INT(SCREENBUFF/256)
IO 330 LOBYTE=SCREENBUFF-HIBYTE*256
HE 340 POKE BUFFER,LOBYTE:POKE BUFFER+1,H
   IBYTE
JZ 350 POKE CMD,7
NR 360 POKE BUFFLEN,255:POKE BUFFLEN+1,25
   5
AM 370 A=USR(ADR(MC$)):CLOSE #1:RETURN
GC 380 REM SET COLOURS
XO 390 POKE C0,COL0:POKE C1,COL1:POKE C2,
   COL2
UZ 400 POKE C3,COL3:POKE C4,COL4:RETURN
EL 410 REM SETUP I/O PARAMETERS
CY 420 DIM MC$(10)
LR 430 BUFFER=852:BUFFLEN=856
ZV 440 AUX=859:CMD=850
LW 450 FOR I=1 TO 7:READ A
HT 460 MC$(I,I)=CHR$(A)
MY 470 NEXT I:RETURN
YC 480 DATA 104,162,16,76,86,228,96
QZ 490 REM ADD VIDEO EFFECT ROUTINES FROM
    LINE 500
MY 500 GOTO 500
```

```
JC 490 REM ** MACHINE CODE LIBRARY **
           ** 5.3 VIDEO EFFECTS    **
           ** FADE IN/OUT ROUTINES **
QQ 500 GOSUB 530:REM JUMP TO FADEIN SUBRO
   UTINE
PJ 510 GOSUB 640:REM JUMP TO FADEOUT SUBR
   OUTINE
ZS 515 RETURN
CC 520 REM BRIGHTEN COLOURS
LN 530 FOR I=176 TO 186
SJ 540 IF PEEK(C0)<>COL0 THEN POKE C0,I
VC 550 IF PEEK(C1)<>COL1 THEN POKE C1,I
XV 560 IF PEEK(C2)<>COL2 THEN POKE C2,I
AO 570 IF PEEK(C3)<>COL3 THEN POKE C3,I
DH 580 IF PEEK(C4)<>COL4 THEN POKE C4,I
ND 590 FOR DELAY=1 TO 50:NEXT DELAY
FW 600 NEXT I
MO 610 FOR DELAY=1 TO 50:NEXT DELAY
ZG 620 RETURN
MH 630 REM DISSOLVE
KI 640 FOR I=192 TO 176 STEP -1
VZ 650 IF PEEK(C0)<>176 THEN POKE C0,PEEK
   (C0)-1
ZL 660 IF PEEK(C1)<>176 THEN POKE C1,PEEK
   (C1)-1
CK 670 IF PEEK(C2)<>176 THEN POKE C2,PEEK
   (C2)-1
GJ 680 IF PEEK(C3)<>176 THEN POKE C3,PEEK
   (C3)-1
JV 690 IF PEEK(C4)<>176 THEN POKE C4,PEEK
   (C4)-1
MN 700 FOR DELAY=1 TO 50:NEXT DELAY
FZ 710 NEXT I
ZH 720 RETURN
```

```
YV 490 REM ** MACHINE CODE LIBRARY **
           ** 5.5 VIDEO EFFECTS    **
           **       SQUEEZE        **
YS 500 FOR I=0 TO 201
OD 510 READ A:POKE 1536+I,A:NEXT I
EQ 520 A=USR(1536):RETURN
PG 530 DATA 104,165,88,133,214,133,203,16
   5,89,133,215,133,204,169,68,133,216,13
   3,205,169
FT 540 DATA 97,133,217,133,206,169,96,133
   ,218,169,0,160,0,162,0,32,165,6,32,189
GK 550 DATA 6,232,224,96,208,245,162,0,16
   0,0,177,214,141,201,6,177,203,141,152,
   6
WE 560 DATA 32,165,6,32,177,6,173,152,6,1
   45,214,173,201,6,145,203,32,153,6,32
ZQ 570 DATA 189,6,200,192,40,208,219,228,
   218,240,10,232,32,153,6,32,189,6,76,48
QE 580 DATA 6,169,0,160,0,145,214,145,203
   ,200,192,40,208,247,198,218,165,218,20
   1,0
NT 590 DATA 240,15,165,88,133,214,133,203
   ,165,89,133,215,133,204,76,33,6,32,177
   ,6
RH 600 DATA 169,0,160,0,145,203,200,192,4
   0,208,249,96,0,56,165,214,233,40,176,2
MZ 610 DATA 198,215,133,214,96,24,165,214
   ,105,40,144,2,230,215,133,214,96,56,16
   5,203
OO 620 DATA 233,40,176,2,198,204,133,203,
   96,24,165,203,105,40,144,2,230,204,133
   ,203
TI 630 DATA 96,0,0,0,0,0
```

Left - Listing 2
Centre - Listing 3
Right - Listing 5
Listing 4 opposite

FADE OUT

If you purchase this month's issue disk then a 62 sector picture file will be found on the disk as well as the program listings for this article. Also included is a machine code program that demonstrates some of the video effects used.

THE FADE

One of the techniques used in film making is where an image gradually brightens or gradually fades to darkness. Listing 1 - FADEIN/OUT - mimics this type of effect.

LINES 260 TO 370 contain a standard routine to set up a graphic screen and is similar to the BASIC Graphics command. A value of 8 is used at line 290 to clear the screen and display no text window. A value of 24 adds the text window to graphic modes that can support them. A value of 40 does not clear the screen and does not display the text window. 44 adds the text window and does not clear the screen.

LINE 310 sets the graphic mode to 15. Any other value sets the appropriate graphic mode.

LINES 430 TO 540 open an I/O channel to load the picture file. For a fuller description of how to load and save files see Part 2 of the Machine Code Library series in issue 38 of New Atari User. All the listings are designed to work with disk files but can be adapted to cassette files. Again see Part 2 for ways in which this can be done-

.**LINES 560 TO 610** set all the colour registers to the background colour which in this example is 176 (dark green). This means that you cannot see the image being loaded.

After the picture has been loaded, lines 850 to 1080 increase the colour so that the picture gradually appears. The brightest colour value is used in line 860. Most commercial picture files contain the colour values in the file - so it is possible to extract the information directly from the file. To make thing simple I have set all the colours to a shade of green (values 176 to 188) - obviously lines 850 to 1080 can be adapted to use any colours you like.

The speed of the routine is controlled by lines 1010 to 1070. The speed can be altered by modifying the value loaded to the X register in line 1020.

LINES 1100 TO 1390 perform the opposite procedure by gradually darkening the picture. As before, the colour values can be altered and the speed changed by modifying line 1310.

LOADING PICTURES

The BASIC PICTURE LOADER in Listing 2 is a BASIC program that loads screen files. All the BASIC versions of the video effects are added to this routine from line 500 onwards. This routine accesses the Atari'S input/output part of the Operating System and is based on routines used in Part 2 of the Machine Code Library series.

LINES 100 TO 110 can be modified to change the colours registers.

```
10 ;--------------------
20 ;MACHINE CODE LIBRARY
30 ;by Steve Willisamson
40 ;for NEW ATARI USER
50 ;PART 5.4 VIDEO EFFECTS
60 ;SQUEEZE
70 ;--------------------
80        *=  20000
90        .OPT OBJ
0100 CIO =   58454
0110 COMMAND = 834
0120 BUFFER = 836
0130 BUFFLEN = 840
0140 AUX =   842
0150 AUX2 =  843
0160 COLOR0 = 708
0170 COLOR1 = 709
0180 COLOR2 = 710
0190 COLOR3 = 711
0200 COLOR4 = 712
0210 SCREENBUFF = 24900
0220 R0  =   203
0230 R1  =   204
0240 R2  =   205
0250 R3  =   206
0260 R4  =   207
0270 R5  =   208
0280 R6  =   209
0290 R7  =   210
0300 COUNTER0 = 207
0310 COUNTER1 = 208
0320 ;
0330 ;------------------
0340 ;SET GRAPHIC SCREEN
0350 ;------------------
0360 ;
0370      LDX #32
0380      LDA #3
0390      STA COMMAND,X
0400      LDA #0      Clear screen
0410      STA AUX,X
0420      LDA #15     Graphic 15
0430      STA AUX2,X
0440      LDA #NAME&255
0450      STA BUFFER,X
0460      LDA #NAME/256
0470      STA BUFFER+1,X
0480      JSR CIO
0490 ;
0500 ;----------------------
0510 ;LOAD PICTURE TO SCREEN
0520 ;----------------------
0530 ;
0540      LDX #16     Open I/O channel
0550      LDA #NAME1&255
0560      STA BUFFER,X
0570      LDA #NAME1/256
0580      STA BUFFER+1,X
0590      LDA #3
0600      STA COMMAND,X
0610      LDA #4
0620      STA AUX,X
0630      LDA #0
0640      STA AUX2,X
0650      JSR CIO
0660 ;
0670      LDA #176    Set all colours
0680      STA COLOR0  to background
0690      STA COLOR1  colour.
0700      STA COLOR2
0710      STA COLOR3
0720      STA COLOR4
0730 ;
0740      LDX #16     ;Load picture
0750      LDA 88
0760      STA BUFFER,X at top of screen
0770      LDA 89
0780      STA BUFFER+1,X
0790      LDA #0
0800      STA BUFFLEN,X
0810      LDA #30
0820      STA BUFFLEN+1,X
0830      LDA #7
0840      STA COMMAND,X
0850      JSR CIO
0860 ;
0870      LDX #16     Close I/O
0880      LDA #12     Channel.
0890      STA COMMAND,X
0900      JSR CIO
0910 ;
0920 ;----------
0930 ;SET COLOURS
0940 ;----------
0950 ;
0960      LDA #182
0970      STA COLOR0
0980      LDA #184
0990      STA COLOR1
1000      LDA #186
1010      STA COLOR2
1020      LDA #188
1030      STA COLOR3
1040      LDA #176
1050      STA COLOR4
1060      JSR EFFECT
1070 STOP JMP STOP
1080 NAME .BYTE "S:"
1090 NAME1 .BYTE "D:PICTURE"
1100      .BYTE 0,0,0,0,0,0,0
1110 EFFECT
1120 ;---------------------
1130 ;SQUEEZE/INVERT EFFECT
1140 ;---------------------
1150 R8  =   211
1160 R9  =   212
1170 R10 =   213
1180 R11 =   214
1190 R12 =   215
1200 R13 =   216
1210 R14 =   217
1220 COUNTER = 218
1230 DCOUNTER = 219
1240      LDA 88
1250      STA R11
1260      STA R0
1270      LDA 89
1280      STA R12
1290      STA R1
1300      LDA #SCREENBUFF&255
1310      STA R13
1320      STA R2
1330      LDA #SCREENBUFF/256
1340      STA R14
1350      STA R3
1360      LDA #96
1370      STA COUNTER
1380      LDA #0
1390      LDY #0
1400 START LDX #0     Find middle
1410 L1   JSR ADD     of screen.
1420      JSR ADD1
1430      INX
1440      CPX #96
1450      BNE L1
1460      LDX #0
1470 L2   LDY #0
1480 L3   LDA (R11),Y Load data on scan
1490      STA STORE1  line to stores
1500      LDA (R0),Y
1510      STA STORE
1520      JSR ADD     Find next line
1530      JSR SUBTRACT1
1540      LDA STORE
1550      STA (R11),Y Store top scan
1560      LDA STORE1  line data in
1570      STA (R0),Y  bottom and
1580      JSR SUBTRACT visa versa.
1590      JSR ADD1
1600      INY
1610      CPY #40
1620      BNE L3
1630      CPX COUNTER
1640      BEQ EXX3
1650      INX
1660      JSR SUBTRACT
1670      JSR ADD1
1680 ONC JMP L2
1690 EXX3 LDA #0
1700      LDY #0
1710 L4   STA (R11),Y
1720      STA (R0),Y
1730      INY
1740      CPY #40
1750      BNE L4
1760      DEC COUNTER
1770      LDA COUNTER
1780      CMP #0
1790      BEQ OND
1800      LDA 88
1810      STA R11
1820      STA R0
1830      LDA 89
1840      STA R12
1850      STA R1
1860      JMP START
1870 OND JSR SUBTRACT1
1880      LDA #0
1890      LDY #0
1900 L5   STA (R0),Y
1910      INY
1920      CPY #40
1930      BNE L5
1940      RTS
1950 STORE BRK
1960 SUBTRACT
1970      SEC          Subtract and add
   ract
1980      LDA R11      routines add/subtra
  t
1990      SBC #40      40 bytes or 1 scan
2000      BCS EX4      line.
2010      DEC R12
2020 EX4 STA R11
2030      RTS
2040 ADD
2050      CLC
2060      LDA R11
2070      ADC #40
2080      BCC EX5
2090      INC R12
2100 EX5 STA R11
2110      RTS
2120 SUBTRACT1
2130      SEC
2140      LDA R0
2150      SBC #40
2160      BCS EX6
2170      DEC R1
2180 EX6 STA R0
2190      RTS
2200 ADD1
2210      CLC
2220      LDA R0
2230      ADC #40
2240      BCC EX7
2250      INC R1
2260 EX7 STA R0
2270      RTS
2280 STORE1 BRK
```

Listing 4

SCREEN FADE IN BASIC

Listing 3 is a version of the screen fade routine written in BASIC. Because speed is not an important factor in the routine there is no need to call a machine code routine to perform the fade and brighten operations.

Because the routine needs to start with the colours all the same as the background colour, when using this routine with the BASIC picture loader, delete line 210. The BASIC picture loader includes a routine for loading a picture file to a screen buffer (this will be explained later). Because the FADE IN/OUT routine does not use this feature line 200 can be deleted when adding the routine to the BASIC picture loader.

THE SQUEEZE

The effect which I have called SQUEEZE (Listing 4) gradually 'squeezes' the image and flips between upright and inverted. The routine uses a number of zero page addresses that are used as registers to control the routine.

In a graphics 15 screen there are 192 scan lines 40 bytes wide. The routine alters each scan line to produce the effect. Lines 1960 to 2280 are routines for adding and subtracting 40 bytes so that the address in RAM of each scan line can be calculated.

Listing 5 contains the SQUEEZE machine code routine that has been converted to data statements so that it can be accessed from BASIC. Because of the nature of the routine it is not relocatable so must be loaded from address 1536 onwards. This routine must be added to listing 2, the BASIC picture file loader.

Apart from listing 5 all the machine code data for use in BASIC programs are loaded to string variables so that they will not →

```
10 ;--------------------
20 ;MACHINE CODE LIBRARY
30 ;by Steve Willisamson
40 ;for NEW ATARI USER
50 ;PART 5.6 VIDEO EFFECTS
60 ;PICTURE LOADER
70 ;--------------------
80        *=  20000
90        .OPT OBJ
0100 CIO =   58454
0110 COMMAND = 834
0120 BUFFER = 836
0130 BUFFLEN = 840
0140 AUX =   842
0150 AUX2 =  843
0160 COLOR0 = 708
0170 COLOR1 = 709
0180 COLOR2 = 710
0190 COLOR3 = 711
0200 COLOR4 = 712
0210 SCREENBUFF = 24900
0220 R0  =   203
0230 R1  =   204
0240 R2  =   205
0250 R3  =   206
0260 R4  =   207
0270 R5  =   208
0280 R6  =   209
0290 R7  =   210
0300 COUNTER0 = 207
0310 COUNTER1 = 208
0320 ;
0330 ;------------------
0340 ;SET GRAPHIC SCREEN
0350 ;------------------
0360 ;
0370      LDX #32
0380      LDA #3
0390      STA COMMAND,X
0400      LDA #8       Clear screen
0410      STA AUX,X
0420      LDA #15      Graphic 15
0430      STA AUX2,X
0440      LDA #NAME&255
0450      STA BUFFER,X
0460      LDA #NAME/256
0470      STA BUFFER+1,X
0480      JSR CIO
0490 ;
0500 ;-----------------------------
0510 ;LOAD PICTURE TO SCREEN BUFFER
0520 ;-----------------------------
0530 ;
0540      LDX #16      Open I/O channel
0550      LDA #NAME1&255
0560      STA BUFFER,X
0570      LDA #NAME1/256
0580      STA BUFFER+1,X
0590      LDA #3
0600      STA COMMAND,X
0610      LDA #4
0620      STA AUX,X
0630      LDA #0
0640      STA AUX2,X
0650      JSR CIO
0660 ;
0670      LDA #176     Set all colours
0680      STA COLOR0   to background
0690      STA COLOR1   colour.
0700      STA COLOR2
0710      STA COLOR3
0720      STA COLOR4
0730 ;
0740      LDX #16      ;Load picture
0750      LDA #SCREENBUFF&255 file
0760      STA BUFFER,X
0770      LDA #SCREENBUFF/256
0780      STA BUFFER+1,X
0790      LDA #255
0800      STA BUFFLEN,X
0810      LDA #255
0820      STA BUFFLEN+1,X
0830      LDA #7
0840      STA COMMAND,X
0850      JSR CIO
0860 ;
0870      LDX #16      Close I/O
0880      LDA #12      Channel.
0890      STA COMMAND,X
0900      JSR CIO
0910 ;
0920 ;----------
0930 ;SET COLOURS
0940 ;----------
0950 ;
0960      LDA #182
0970      STA COLOR0
0980      LDA #184
0990      STA COLOR1
1000      LDA #186
1010      STA COLOR2
1020      LDA #188
1030      STA COLOR3
1040      LDA #176
1050      STA COLOR4
1060      JSR EFFECT
1070 STOP JMP STOP
1080 NAME .BYTE "S:"
1090 NAME1 .BYTE "D:PICTURE"
1100      .BYTE 0,0,0,0,0,0,0
1110 EFFECT
1120 ;Add video effect routine(s) here
```

```
1120 ;MACHINE CODE LIBRARY
1130 ;5.7 OPEN OUT
1140 ;--------
1150 ;
1160 ;-------------------------
1170 ;Calculate middle of screen
1180 ;-------------------------
1190      LDA 88
1200      STA R0
1210      LDA 89
1220      STA R1
1230      LDA #SCREENBUFF&255
1240      STA R2
1250      LDA #SCREENBUFF/256
1260      STA R3
1270      LDY #0
1280 L1   LDA R0
1290      CLC
1300      ADC #40
1310      BCC ON1
1320      INC R1
1330 ON1  STA R0
1340      LDA R2
1350      CLC
1360      ADC #40
1370      BCC ON2
1380      INC R3
1390 ON2  STA R2
1400      INY
1410      CPY #96
1420      BNE L1
1430      LDA R0
1440 ;
1450 ;-------------------------
1460 ;Transfer picture data from
1470 ;screen buffer to screenram
1480 ;one line at a time starting
1490 ;the middle of the screen
1500 ;---------------------------
1510      STA R4
1520      LDA R1
1530      STA R5
1540      LDA R2
1550      STA R6
1560      LDA R3
1570      STA R7
1580      LDX #0
1590 L2   LDY #0
1600 L3   LDA (R2),Y
1610      STA (R0),Y
1620      LDA (R6),Y
1630      STA (R4),Y
1640      INY
1650      CPY #40
1660      BNE L3
1670      LDA R4
1680      CLC
1690      ADC #40
1700      BCC ON3
1710      INC R5
1720 ON3  STA R4
1730      LDA R6
1740      CLC
1750      ADC #40
1760      BCC ON4
1770      INC R7
1780 ON4  STA R6
1790      LDA R0
1800      SEC
1810      SBC #40
1820      BCS ON5
1830      DEC R1
1840 ON5  STA R0
1850      LDA R2
1860      SEC
1870      SBC #40
1880      BCS ON6
1890      DEC R3
1900 ON6  STA R2
1910      TXA           Delay loop
1920      PHA
1930      TYA
1940      PHA
1950      LDY #255
1960 L4   LDX #50
1970 L5   DEX
1980      BNE L5
1990      DEY
2000      BNE L4
2010      PLA
2020      TAY
2030      PLA
2040      TAX
2050      INX
2060      CPX #96
2070      BNE L2
2080      RTS
```

```
1120 ;MACHINE CODE LIBRARY
1130 ;5.8 CLOSE IN
1140 ;--------
1150 ;
1160 ;-------------------------
1170 ;Transfer screen buffer to
1180 ;screenram.
1190 ;-------------------------
1200      LDA 88
1210      STA R0
1220      LDA 89
1230      STA R1
1240      LDX #0
1250      LDA #SCREENBUFF&255
1260      STA R2
1270      LDA #SCREENBUFF/256
1280      STA R3
1290      LDX #0
1300 L1A LDY #0
1310 L2A LDA (R2),Y
1320      STA (R0),Y
1330      INY
1340      CPY #40
1350      BNE L2A
1360      LDA R2
1370      CLC
1380      ADC #40
1390      BCC ON1
1400      INC R3
1410 ON1  STA R2
1420      LDA R0
1430      CLC
1440      ADC #40
1450      BCC ON2
1460      INC R1
1470 ON2  STA R0
1480      INX
1490      CPX #192
1500      BNE L1A
1510 ;
1520 ;
1530 ;----------------------------
1540 ;Calculate bottom of screenram
1550 ;----------------------------
1560      LDA 88
1570      STA R0
1580      LDA 89
1590      STA R1
1600      LDY #0
1610 L1   LDA R0
1620      CLC
1630      ADC #40
1640      BCC ON3
1650      INC R1
1660 ON3  STA R0
1670      INY
1680      CPY #192
1690      BNE L1
1700 ;
1710 ;----------------------------
1720 ;Transfer zeros to screen ram
1730 ;one line at a time starting
1740 ;at top and bottom.
1750 ;----------------------------
1760      LDA 88
1770      STA R2
1780      LDA 89
1790      STA R3
1800      LDX #0
1810 L2   LDY #0
1820 L3   LDA #0
1830      STA (R0),Y
1840      STA (R2),Y
1850      INY
1860      CPY #40
1870      BNE L3
1880      LDA R2
1890      CLC
1900      ADC #40
1910      BCC ON4
1920      INC R3
1930 ON4  STA R2
1940      LDA R0
1950      SEC
1960      SBC #40
1970      BCS ON5
1980      DEC R1
1990 ON5  STA R0
2000      TXA           Delay loop
2010      PHA
2020      TYA
2030      PHA
2040      LDY #255
2050 L4   LDX #25
2060 L5   DEX
2070      BNE L5
2080      DEY
2090      BNE L4
2100      PLA
2110      TAY
2120      PLA
2130      TAX
2140      INX
2150      CPX #97
2160      BNE L2
2170      RTS
```

Left - Listing 6

Above - Listing 7

Right - Listing 8

SQUEEZE SQUEEZE SQUEEZE SQUEEZE

clash with any areas of RAM used by the BASIC program.

SCREEN BUFFERS

The PICTURE LOADER (Listing 6) introduces the screen buffer technique. The picture data is loaded, not directly into the screen display area of memory, but into a buffer area which, in this case, starts at 24900. The data can then be copied into the screen display area. This means that no matter how much the screen display is manipulated, there is always a complete copy of the picture data in memory which can be re-copied to the screen display.

The remainder of the source code listings are designed to add on to the end of the loader routine starting at line 1120.

IN AND OUT

OPEN OUT (listing 7) builds up the picture gradually by copying data from the screen buffer to the screen display one line at a time starting at the middle. This gives the effect of the picture expanding from the centre of the screen.

CLOSEIN (Listing 8) is the opposite of listing 7. The picture is removed one scan line at a time.

Listings 9 and 10 are the OPENOUT and CLOSEIN routines that can be used with the BASIC picture loader. Delete line 210 of the picture loader when adding Listing 9.

RANDOM FADE

RANDOM FADE IN (listing 11) randomly copies pixels from the screen buffer to the screen display so that the picture gradually takes shape. RANDOM FADE OUT performs the opposite, randomly erasing pixels so that the picture gradually disintegrates. Listings 13 and 14 are the BASIC versions of these routines. Delete line 210 of the BASIC picture loader when using Listing 13.

That's it for this issue. Machine code programmers should be able to expand and adapt the programming techniques contained in the source code listings to create other visual effects and everyone should be able to include some of these routines in their own BASIC programs to give them that more professional look. ●

```
GS 490 REM ** MACHINE CODE LIBRARY **
           ** 5.9 VIDEO EFFECTS    **
           **      OPEN OUT        **
KF 500 DIM OUT$(150)
KL 510 FOR I=1 TO 148:READ A
MH 520 OUT$(I,I)=CHR$(A)
GB 530 NEXT I
HM 540 A=USR(ADR(OUT$)):RETURN
JY 550 DATA 104,165,88,133,203,165,89,133
   ,204,169,68,133,205,169,97,133,206,160
   ,0,165,203
YT 560 DATA 24,105,40,144,2,230,204,133,2
   03,165,205,24,105,40,144,2,230,206,133
   ,205
ZK 570 DATA 200,192,96,208,229,165,203,13
   3,207,165,204,133,208,165,205,133,209,
   165,206,133
RJ 580 DATA 210,162,0,160,0,177,205,145,2
   03,177,209,145,207,200,192,40,208,243,
   165,207
PW 590 DATA 24,105,40,144,2,230,208,133,2
   07,165,209,24,105,40,144,2,230,210,133
   ,209
NP 600 DATA 165,203,56,233,40,176,2,198,2
   04,133,203,165,205,56,233,40,176,2,198
   ,206
HZ 610 DATA 133,205,138,72,152,72,160,255
   ,162,50,202,208,253,136,208,248,104,16
   8,104,170
ZL 620 DATA 232,224,96,208,174,96,0,0,0,0
   ,0,0,0,0,0,0,0,0,0,0
```

```
KK 490 REM ** MACHINE CODE LIBRARY **
           ** 5.10 VIDEO EFFECTS   **
           **      CLOSE IN        **
JM 500 DIM IN$(110)
DR 510 FOR I=1 TO 102:READ A
JG 520 IN$(I,I)=CHR$(A)
GB 530 NEXT I
XO 540 A=USR(ADR(IN$)):RETURN
SD 550 DATA 104,165,88
DP 560 DATA 133,203,165,89,133,204,160,0,
   165,203,24,105,40,144,2,230,204,133,20
   3,200
DR 570 DATA 192,192,208,240,165,88,133,20
   5,165,89,133,206,162,0,160,0,169,0,145
   ,203
UD 580 DATA 145,205,200,192,40,208,245,16
   5,205,24,105,40,144,2,230,206,133,205,
   165,203
SL 590 DATA 56,233,40,176,2,198,204,133,2
   03,138,72,152,72,160,255,162,25,202,20
   8,253
TE 600 DATA 136,208,248,104,168,104,170,2
   32,224,97,208,198,96,0,0,0,0,0,0,0
```

Above top - Listing 9

Above centre - Listing 10

Right - Listing 11

Below left - Listing 13

Below right - Listing 14

```
1120 ;MACHINE CODE LIBRARY
1130 ;5.11 RANDOM FADE IN
1150 ;--------------
1160      LDA #255     Set counters
1170      STA COUNTER0 to required no
1180      LDA #2       of loops
1190      STA COUNTER1
1200 L1   LDA 88
1210      STA R0
1220      LDA 89
1230      STA R1
1240      LDA #SCREENBUFF&255
1250      STA R2
1260      LDA #SCREENBUFF/256
1270      STA R3
1280      LDX #0
1290 L2   LDY 53770    Load Y with
1300      LDA (R2),Y   random value and
1310      STA (R0),Y   plot pixels to
1320      INC R1       screen.
1330      INC R3
1340      INX
1350      CPX #30
1360      BNE L2
1370      LDY #255
1380 L3   LDX #50
1390 L4   DEX
1400      BNE L4
1410      DEY
1420      BNE L3
1430      DEC COUNTER0
1440      LDA COUNTER0
1450      BNE L1
1460      LDA #255
1470      STA COUNTER0
1480      DEC COUNTER1
1490      LDA COUNTER1
1500      BNE L1
1510      LDA 88
1520      STA R0
1530      LDA 89
1540      STA R1
1550      LDA #SCREENBUFF&255
1560      STA R2
1570      LDA #SCREENBUFF/256
1580      STA R3
1590      LDX #0       Plot rest of
1600 L5   LDY #0       screen.
1610 L6   LDA (R2),Y
1620      STA (R0),Y
1630      INY
1640      CPY #40
1650      BNE L6
1660      LDA R2
1670      CLC
1680      ADC #40
1690      BCC ON1
1700      INC R3
1710 ON1  STA R2
1720      LDA R0
1730      CLC
1740      ADC #40
1750      BCC ON2
1760      INC R1
1770 ON2  STA R0
1780      INX
1790      CPX #192
1800      BNE L5
1810      RTS
```

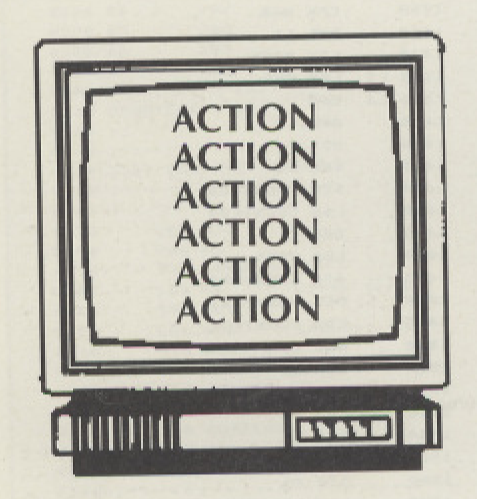
Listing 12 overleaf

```
LE 490 REM ** MACHINE CODE LIBRARY **
           ** 5.13 VIDEO EFFECTS   **
           ** FADE IN/OUT ROUTINES **
QQ 500 GOSUB 530:REM JUMP TO FADEIN SUBRO
   UTINE
PJ 510 GOSUB 640:REM JUMP TO FADEOUT SUBR
   OUTINE
ZS 515 RETURN
CC 520 REM BRIGHTEN COLOURS
LN 530 FOR I=176 TO 186
SJ 540 IF PEEK(C0)<>COL0 THEN POKE C0,I
VC 550 IF PEEK(C1)<>COL1 THEN POKE C1,I
XV 560 IF PEEK(C2)<>COL2 THEN POKE C2,I
AO 570 IF PEEK(C3)<>COL3 THEN POKE C3,I
DH 580 IF PEEK(C4)<>COL4 THEN POKE C4,I
ND 590 FOR DELAY=1 TO 50:NEXT DELAY
FW 600 NEXT I
MO 610 FOR DELAY=1 TO 50:NEXT DELAY
ZG 620 RETURN
MH 630 REM DISSOLVE
KI 640 FOR I=192 TO 176 STEP -1
VZ 650 IF PEEK(C0)<>176 THEN POKE C0,PEEK
   (C0)-1
ZL 660 IF PEEK(C1)<>176 THEN POKE C1,PEEK
   (C1)-1
CX 670 IF PEEK(C2)<>176 THEN POKE C2,PEEK
   (C2)-1
GJ 680 IF PEEK(C3)<>176 THEN POKE C3,PEEK
   (C3)-1
JV 690 IF PEEK(C4)<>176 THEN POKE C4,PEEK
   (C4)-1
MN 700 FOR DELAY=1 TO 50:NEXT DELAY
FZ 710 NEXT I
ZH 720 RETURN
```

```
MZ 490 REM ** MACHINE CODE LIBRARY **
           ** 5.14 VIDEO EFFECTS   **
           ** RANDOM FADE OUT      **
XA 500 DIM RANDOUT$(120)
HC 510 FOR I=1 TO 116:READ A
HT 520 RANDOUT$(I,I)=CHR$(A)
GB 530 NEXT I
TY 540 A=USR(ADR(RANDOUT$)):RETURN
YV 550 DATA 104,169,255,133,207,169,2,133
   ,208,165,88,133,203,165,89,133,204,169
   ,68,133,205
MK 560 DATA 169,97,133,206,162,0,172,10,2
   10,169,0,145,203,230,204,232,224,30,20
   8,242
EV 570 DATA 160,255,162,50,202,208,253,13
   6,208,248,198,207,165,207,208,208,169,
   255,133,207
YJ 580 DATA 198,208,165,208,208,198,165,8
   8,133,203,165,89,133,204,162,0,160,0,1
   69,0
BU 590 DATA 145,203,200,192,40,208,247,16
   5,203,24,105,40,144,2,230,204,133,203,
   232,224
FZ 600 DATA 192,208,229,96,0,0,0,0,0,0,0,
   0,0,0,0,0,0,0,0,0
```

MACHINE CODE LIBRARY

LIGHTS ... CAMERA ..




```
1120 ;MACHINE CODE LIBRARY
1130 ;5.12 RANDOM FADE OUT
1140 ;---------------
1150 ;
1160 ;---------------------------
1170 ;Transfer screen buffer to
1180 ;screenram.
1190 ;---------------------------
1200      LDA 88
1210      STA R0
1220      LDA 89
1230      STA R1
1240      LDA #SCREENBUFF&255
1250      STA R2
1260      LDA #SCREENBUFF/256
1270      STA R3
1280      LDX #0
1290 L1   LDY #0
1300 L2   LDA (R2),Y
1310      STA (R0),Y
1320      INY
1330      CPY #40
1340      BNE L2
1350      LDA R2
1360      CLC
1370      ADC #40
1380      BCC ON1
1390      INC R3
1400 ON1  STA R2
1410      LDA R0
1420      CLC
1430      ADC #40
1440      BCC ON2
1450      INC R1
1460 ON2  STA R0
1470      INX
1480      CPX #192
1490      BNE L1
1500 ;-------------------------------
1510 ;Plot random zeros to screenram
1520 ;-------------------------------
1530      LDA #255     Set counters
1540      STA COUNTER0 to required no
1550      LDA #2       of loops
1560      STA COUNTER1
1570 L3   LDA 88
1580      STA R0
1590      LDA 89
1600      STA R1
1610      LDA #SCREENBUFF&255
1620      STA R2
1630      LDA #SCREENBUFF/256
1640      STA R3
1650      LDX #0
1660 L4   LDY 53770    Load Y with
1670      LDA #0       random value and
1680      STA (R0),Y   plot pixels to
1690      INC R1       screen.
1700      INX
1710      CPX #30
1720      BNE L4
1730      LDY #255
1740 L5   LDX #50
1750 L6   DEX
1760      BNE L6
1770      DEY
1780      BNE L5
1790      DEC COUNTER0
1800      LDA COUNTER0
1810      BNE L3
1820      LDA #255
1830      STA COUNTER0
1840      DEC COUNTER1
1850      LDA COUNTER1
1860      BNE L3
1870 ;---------------------
1880 ;Clear rest of screen
1890 ;---------------------
1900      LDA 88
1910      STA R0
1920      LDA 89
1930      STA R1
1940      LDX #0
1950 L7   LDY #0
1960 L8   LDA #0
1970      STA (R0),Y
1980      INY
1990      CPY #40
2000      BNE L8
2010      LDA R0
2020      CLC
2030      ADC #40
2040      BCC ON3
2050      INC R1
2060 ON3  STA R0
2070      INX
2080      CPX #192
2090      BNE L7
2100      RTS
```

Listing 12

BACK ISSUES

ISSUE 31 and earlier now in short supply!

PAGE 6 back issues represent an excellent way of increasing the enjoyment of your Atari with articles to enlighten you, programs to type in and reviews of software to guide you. Almost all of the content of past issues will be as fresh and relevant today as when it appeared - increase your enjoyment now, before it's too late! Disks are available for all issues, containing all the 8-bit programs from each issue ready to run, and they often include bonuses not found in the magazine.

Limited numbers of the following are still available - see earlier issues for full description of contents

ISSUE 20 - *SOLD OUT*

ISSUE 21 - Includes a Guide To Error Codes. *DISK ALSO AVAILABLE*

ISSUE 22 - Includes a type-in spreadsheet. *DISK AVAILABLE WITH BONUS*

ISSUE 23 - Includes utilities XREF and VERIFY. *BONUS DISK AVAILABLE*

ISSUE 24 - *SOLD OUT*

The following issues are still available

ISSUE 25 - Another biggie! A must for 1029 printer owners with 3 great utilities including a SCREEN DUMP. A super Japanese chess game called SHOGI, a type in REVISION C BASIC, a full feature on disks and more. For ST, type in OTHELLO, reviews of LEADER BOARD and MEAN 18, Hints and Tips and several other reviews and articles.


DISK AVAILABLE - ALL THOSE 1029 PROGRAMS READY TO GO!

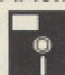
ISSUE 26 - SOLID MODELLING is one of the best non-game programs we have published. Be creative! Other programs include SOURCE WRITER for machine code programmers, FLEXIBLE FINGERS to help you type, NUTS and more. Reviews of TRIVIAL PURSUIT, DVC/65, SPEEDSCRIPT and much, much more. ST users can learn all about HARD DISKS, FAST BASIC, TYPESETTER ELITE, DEGAS ELITE and read reviews on a whole lot more software.


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ISSUE 27 - Some cracking listings for the 8-bit. In GREAT BRITAIN LTD. you can be the Chancellor and help run the country. COMPUTER GAMMON is a great Atari version of backgammon and there's ANTS IN YOUR PANTS, DISK COMMAND and others. There is a feature on word processing and stacks of reviews. The ST section includes an in-depth review of ART DIRECTOR and a neat little program to put scrolling stars on your screen! Lots of reviews including HABAVIEW, K-SPREAD 2, K-WORD and many more.

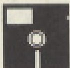

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DISK AVAILABLE - Also contains the winning title screen from our competition.

ISSUE 29 - *SOLD OUT*

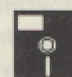
ISSUE 30 - A great follow up to Solid Modelling allows you to animate 3-D objects. Try 3-D ANIMATOR. How about a puzzle with LETTER CASTLE or an arcade style shoot-up from ANTIC called DESERT CHASE? Articles inlcude an in-depth look at GUNSLINGER, *Genealogy With Your Atari* and First Steps on saving screens. Loads of reviews including AUTODUEL and P:R: CONNECTION. The ST section has the continuing GEM series, CYBERSTUDIO, ZOOMRACKS II and lots of games and serious reviews including GFA BASIC, K-Roget, Jupiter Probe


DISK AVAILABLE. DOUBLE SIDED with BONUS MACHINE LANGUAGE ADVENTURE only on the disk!

ISSUE 31 - Our massive survey on all the WARGAMES available for the 8-bit Atari heads this issue which also includes a great type-in synthesiser listing called ORIGINAL SYNTH. Other listings include FONT FACTORY, a nice character editor and a challenging game called BOWL TRAP. A feature on SSI, more Tutorial Subroutines, a long feature on THE NEVERENDING STORY, reviews of ROADWAR 2000 and THE DUNGEON plus many more are also in this issue. ST SECRETS, a new series on ST programming begins with a look at sound and the ST reviews section includes IMG SCAN, BASE TWO, TEMPUS and many more.


DISK AVAILABLE - All the extra files for ORIGINAL SYNTH set up ready to run plus all the other listings.

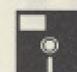
ISSUE 32 - A great card game for 8-bit users called, rather uninspiringly, WHIST plus a two player game of TENNIS and a GRAPH MAKER that works on the 1029 printer. A new series starts on EXPANDING YOUR ATARI and there is an excellent program/tutorial on BUBBLE SORTING. Reviews include THE PAWN, GUILD OF THIEVES, SPARTADOS/U.S. DOUBLER and many more. ST users can find out about programming graphics with ST SECRETS and can read all about the TURBO DIZER, PC DITTO plus reviews of Tanglewood, Defender of The Crown, Winter Olympiad, PROSPERO FORTRAN and more.


DISK AVAILABLE - DOUBLE SIDED with BONUS MACHINE CODE ARCADE GAME only on this disk.

ISSUE 33 - Many readers have said this is our best issue yet with an extensive feature on choosing a printer for your Atari, plus HEAVY METAL, a superb type-in machine language arcade game. Other type-in listings include another game, CRYSTAL CRISIS and two utilities, COLOUR TUNER and SOFTKEY, the latter being a super keyboard 'macro', utility. ST owners can find out more about PROGRAMMING GEM with another article in the series and there are loads of reviews including MASTERPLAN, GUNSHIP and SPECTRUM 512. There's much more in this issue besides, including some great music for the 8-bit.

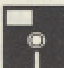

DISK AVAILABLE - including TWO BONUS GAMES that are not in the magazine.

ISSUE 34 - An ADVENTURE special to delight all fans of Atari Adventuring. Exclusive and extensive interview with LEVEL 9, two TYPE-IN 8 bit ADVENTURES, games reviews, bumper A-Z HINTS AND TIPS for all kinds of adventures, a survey of almost every known Atari adventure and much more. Other items include DAVE T'S DISCO, FLYING BY THE BOOK, TUTORIAL SUBROUTINES, the SHELL SORT and the regulars. ST File includes a round up of ST adventures, a review of DUNGEONMASTER, hints on adventures and stacks of general games reviews.

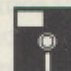

DISK AVAILABLE - includes TWO BONUS ADVENTURES only to be found on this disk.

ISSUE 35 - SOLD OUT. DISK WITH ALL PROGRAMS AND BONUS MACHINE CODE GAME STILL AVAILABLE

ISSUE 36 - Another cracking machine language game from Paul Lay called STAR RIDER plus HEADBANGER, also in machine code, MUSIC BOX and SYNTH II to type in. MAPPING YOUR ADVENTURE shows you how to succeed in adventures, 850 SPLIT reveals secrets about the 850 interface, DESIGNER KEYS allows you to customise the keyboard. Then there's BEGINNER'S BASIC plus a new series on TURBO BASIC, reviews of MERAK, Draconus, Joe Blade and more. For the ST we have B BOOT to allow you to boot from drive B, STOS reviewed, TRIP-A-TRON, SPELLBOOK, SUPERBASE PROFESSIONAL all reviewed and you can find how to never get lost again with AUTOROUTE. All this plus much, much more.


DISK AVAILABLE - includes BONUS MACHINE CODE UTILITY to add 128 colours to Atari Artist or Micro-painter pictures.

ISSUE 37 - Some excellent listings including SCROLLY TEXT EDITOR, a superb utility for creating scrolling messages on the XL/XE just like those on the ST, plus BLASTCOM, a fast and furious blast 'em up, and SUNPLOTTER which shows you the position of the sun and times anywhere in the world. Also FINDER for searching your programs, the first part of MACHINE CODE LIBRARY and the CASSETTE DATABASE. Loads of reviews, as usual, including SpartaDos X. ST File includes the first part in the MIDI series and coverage of PROTEXT and FLAIR PAINT plus reviews of HEADCOACH (where have you seen that reviewed elsewhere?), SPRITE MASTER and a whole host of games. Lot's more besides.


DISK AVAILABLE - includes BONUS program UNDER STARTERS ORDERS, a superb horse racing game for all the family

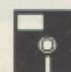
ISSUE 38 - A super educational program, MCQ-TEST, for revision, homework or fun. The MACHINE CODE library looks at saving and loading memory, a utility lists a REAL TIME CLOCK for your XL or XE and THE PODZ is a great scrolling game. There are several more listings. The TIPSTER begins and articles include THE GAMES THEY NEVER RELEASED and more on Turbo Basic. ST owners can enjoy type-in routines for graphics, reviews of MINIX, FUN SCHOOL 2, POLICE QUEST II plus loads of games. The MIDIots guide continues and John Sweeney looks at KINGS QUEST and LEISURE SUIT LARRY.


DISK AVAILABLE - includes GALACTIC CRESTA a BONUS MACHINE CODE GAME previously released commercially!

ISSUE 39 - The first type-in fishing game for the Atari, CATCH DAY, heads the way with MOUSE PARTY and a NUMERICAL CONVERSIONS UTILITY also to type in. Other features include PAGE MARSHAL, HAWKQUEST, the MACHINE CODE LIBRARY on Player Missile Graphics plus, of course, THE TIPSTER and reviews of 8-bit games including STAR WARS. The ST section includes reviews of THE JADE STONE and DOMES OF SHA, the Midiot's guide to the SEQUENCER, a new column on STOS PROGRAMMING plus many, many reviews including GOLDRUSH and GALDREGON'S DOMAIN.


DISK AVAILABLE - includes PRO GOLF as a BONUS. Superb 18 hole action with all the options plus a construction kit to build your own courses

ISSUE 40 - Read all about Sublogic, the company that brought Flight Simulation to the Atari. Programs include SHIFT IT, a mind boggling sliding puzzle game and MEAN MOTOR for fast racing. A simple educational program is LEARN TO READ which you can easily adapt and K-TYPE will improve your touch typing. All these plus the Machine Code Library, Cassette Database, The Tipster and much more. For ST fans the STOS column has type in listings and there are reviews of ARMADA, JET, BATTLETECH and many more. Also the final part in the Midiot's Guide to Music.


DISK AVAILABLE - includes BONUS machine language game GRIDWARS

Disks are still available for many issues which are sold out. These contain all the programs from the issue but not the relevant articles. Please enquire if you are interested.

BACK ISSUES are £1.50 each in the UK, £2.40 for Europe or surface mail elsewhere and £3.50 for Air Mail outside Europe. Prices include postage.
ISSUE DISKS are for any 48k or 64k 8-bit Atari. Each disk is £2.95. Postage FREE in U.K. Overseas add £1 per order (any number of disks)
Send your order to PAGE 6, P.O. BOX 54, STAFFORD, ST16 1DR, ENGLAND. ACCESS and VISA accepted. Telephone 0785 213928



Garry Francis has promised to return to the pages of New Atari User shortly, maybe in another guise, but in the meantime he can't resist those adventures and comes to the rescue of a couple of wayward adventurers from last issue's Tipster column.

ESCAPE FROM TRAAM

In the last Tipster column, Michael Wood asked for some help with Escape from Traam. I'm not surprised! Jyym Pearson writes terrible adventures which are really hard to complete unless you're 'in tune' with his warped ideas and shocking parser. Here's a few general hints before presenting the full solution.

The game starts in the cockpit of a small space cruiser (indicated by an 'S' on the map). Save the game before leaving this room. This may sound silly, but there's a good reason for it. If you are killed or type QUIT, you do not restart at the beginning as you would expect, but are placed in an otherwise inaccessible room (indicated by an 'R' on the map). This is not a problem in itself, but the locations of objects aren't re-initialised either! Your inventory usually (but not always) stays intact and other objects stay where you left them. This may not be what you want. In fact, some objects may then be completely inaccessible. The only way to restart would normally be to reboot. However, if you have saved a game at the start, you can load this to effectively restart from scratch. This is much quicker and easier than rebooting.

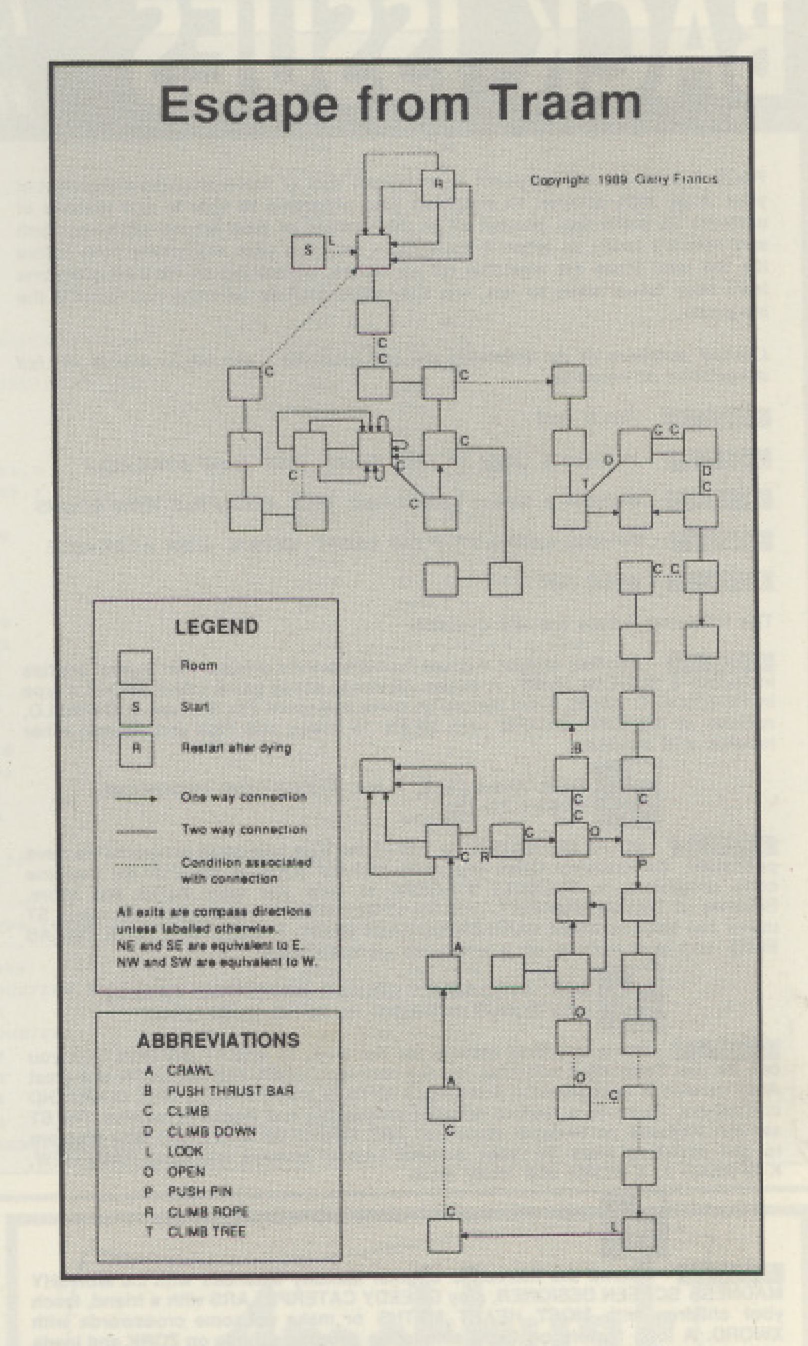
HINTS ....

LOOK in every room and repeat this over and over again until you're satisfied that you've received all possible responses. You can also use LOOK to kill time.

Also try commands like CLIMB and LISTEN in every room.

LOOK at every object listed in room descriptions and the responses to LOOK.

TALK to every character you meet and repeat this over and over again until you're sure you've drawn out every possible scrap of information.



An action will occasionally trigger something at a distant location. If you're stuck, re-explore old territory.

If something works once, try it again - perhaps at a later time in the game.

Use the alphabet in the dictionary to translate the Krillig language by writing the Krillig alphabet on one line and the English alphabet from A to Z underneath it.

Your inventory is limited to six items. Use the full object description when picking something up or putting it down. For example, GET SILVER KEY will work, but GET KEY will not.

Whenever E is a valid exit, you can also use NE or SE to take you to the same room. Similarly, whenever W is a valid exit, you can also use NW or SW. I consider this a bug due to the funny way Jyym Pearson's parser works, hence only the cardinal directions are shown on the map.

Avoid the Traams.

The pendant buried with the creature under the mound has no use other than to get you killed. Leave it alone.

Escape from Traam includes sufficient clues to allow you to solve the game without cheating, but they are sometimes very hard to find. The following solution includes enough information for you to find these clues, but once they are known, the game can be solved in far fewer moves. I did it in 124 moves. Can you do better?

... AND THE SOLUTION

LOOK - LOOK - LOOK - LOOK - LOOK - LOOK - LOOK - LOOK SHIP - GET NYLON ROPE - MOVE SHIP - GET LASER - S - LOOK CLIFF - TIE ROPE TO BUSH - CLIMB - E - S - CLIMB - W - LOOK STREAM - GET FROND - E - N - W - W - LOOK - LOOK - LOOK - FEEL OBJECT - CLIMB - LOOK INSCRIPTIONS - DIG WITH FROND - GET STONE CUP - LOOK ALTAR - DIG WITH FROND - GET HELMET - DROP FROND - W - N - N - LOOK - CLIMB - LOOK SHIP - GET SILVER KEY - S - CLIMB - E - S - CLIMB - FILL CUP - GET CUP OF LIQUID - N - W - W - CLIMB - W - N - N - CLIMB - S - CLIMB - UNTIE ROPE - GET NYLON ROPE - E - S - W - W - CLIMB - W - N - N - CLIMB - LOOK - POUR CUP - GET GOLD BALL - S - S - E - N - E - CLIMB - LOOK - UNLOCK TRUNK WITH KEY - DROP SILVER KEY - OPEN TRUNK - GET DICTIONARY - READ DICTIONARY - DROP DICTIONARY - GET ALPHABET - LOOK ALPHABET - DROP ALPHABET - N - N - TALK - TALK - DROP GOLD BALL - LOOK - CLIMB - TALK - TALK - TALK - TALK - TALK - TALK - TALK - TALK - TALK - S - PUSH STATUE - LOOK - PUSH STATUE - LOOK - GET INSECT - S - LISTEN - CLIMB TREE - E - CLIMB DOWN - S - LISTEN - LOOK BUSH - CLIMB - S - S - S - CLIMB - LOOK - LOOK BLUE DOOR - PUSH PIN - LOOK - KILL HUMAN - WITH LASER - LOOK - GET UNIFORM - S - S - S - CLIMB - LOOK - TALK - KASTAMAN - OPEN - MOVE CABINET - OPEN - W - LOOK SHELVES - READ BOOK - BREAK LOCK - READ BOOK - E - S - S - E - S - S - LOOK - DROP INSECT - LOOK - LOOK - LOOK - LOOK CRACK - PUSH BLOCK - CLIMB - CRAWL - CRAWL - CLIMB - LOOK OBJECT - TIE ROPE TO SPIKE - CLIMB - CLIMB - CLIMB - UNHOOK AUTO PRESSURE - LIFT DECOUPLING RING - PUSH THRUST BAR - LOOK INSTRUMENTS - PUSH BUTTON - LOOK - [THE END]

SAVAGE ISLAND PART 2

Both Michael Wood and Andrew C. Thompson asked about the password for entry to Savage Island Part 2. Savage Island was the first (and probably the only) true two-part adventure ever published. It is absolutely essential to finish part 1 before you can play part 2. This is true for two reasons. Firstly, you need to complete part 1 to get the password for part 2. Secondly, if you don't play part 1, the 'story' is incomplete and part 2 doesn't make much sense. Because of this, I really don't think it's fair to publish the password for part 2. Nevertheless, if you insist...

IF YOU REALLY WANT TO CHEAT!

There are actually two passwords depending on whether or not you correctly complete part 1. They are 123 and 474. I'll let you work out which is which. If you haven't completed part 1 because it was too difficult, it's unlikely that you'll complete part 2, as it's really, really hard. If anyone wants hints, maps or solutions to Savage Island Parts 1 and 2, please let me know as soon as possible (via the editor, if you wish) and I'll put something together for a future issue.

by Garry Francis

You can write to Garry Francis at 26, Baringa Road, Earlwood, N.S.W. 2206, Australia

DOUBLE DISK BONUS

Two great machine language games as the BONUS on this issue's disk

TRACKSTAR

by Bill Halsall

Trackstar is an athletics simulation for 1 or 2 players using 1 or two joysticks and has five separate events in which you may compete. These are 100 metres, long jump, hurdles, javelin and high jump. You must obtain as many points as possible on each of these events. Game play is similar in each event with the joystick being moved between left and right to run and the button being pressed to jump or throw.

In the final event, the high jump, you first set the height by moving the joystick until the requisite height is reached, then press the button to select it. You cannot subsequently reduce this height.

A new game may be started by pressing the joystick button and carrying out the on-screen instructions. There is a short pause between each event to give you a chance to get your breath back or apply first aid to your joystick!

BLOKHEAD

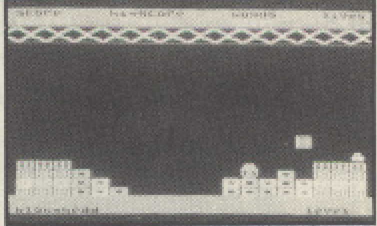
by Peter Lister

BLOKHEAD is a simple to play yet challenging machine code game with some excellent smooth scrolling. The object is to simply collect a key from the pile of blocks on the left hand side of the screen before moving over to the right hand side to open a lock and so proceed to the next level.

Sounds easy, but there is only a certain way to reach the key and lock and we leave you to figure it out. There are 9 levels of increasing speed and difficulty which should keep most players occupied for some time.



Trackstar



Blokhead

These BONUS programs are only available on the Issue 41 disk which Disk Subscribers will have received with their magazine. The issue disk, with all of the 8-bit programs from this issue ready to run and the TWO BONUS GAMES may be obtained separately for just £2.95. See the order form on page 49.

COLOUR DUMP

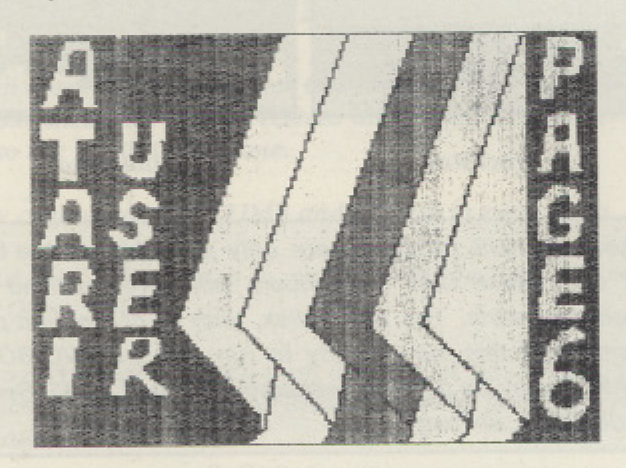
for the STAR LC-10 colour printer

by John Fildes

The STAR LC-10 must be the finest value colour printer around at a price matching many single colour printers, but a colour printer is not much use unless you have a printer driver is it? This program will enable Atari 8-bit owners to load in standard 62 sector picture files and then toggle the colours to match those available from the printer ribbon and then dump out the whole picture in up to eight colours. The printer is capable of printing seven colours but the program allows the user to also specify white, being the colour of the paper. Keys 1 to 4 are used to increment the colour registers and each key controls one register with successive keypresses cycling through the colours available. Once the colours have been chosen, pressing any other key will start the printer.

The picture loading routine comes from an article by Mike Rowe in the February 1986 issue of Atari User with several added routines to drive the printer. The program uses a machine code routine to scan the screen, one column at a time, and to allocate the contents to one of four buffers. The line feed is switched off on the printer and the four strings representing the contents of the buffers are then printed out together with appropriate colour selection information. The printer line feed is then switched back on and the program loops back for the next column.

The picture is printed at the maximum speed of the printer and the total time taken depends on the colours chosen. Each pass of the print head is for one colour but some of the colours available are made up of two ribbon colours and thus some picture lines could take up to eight passes of the print head. If white is chosen as a colour then that pass is skipped. The routine prints at single density, i.e. one dot represents one pixel on the screen. The maximum resolution for four colour pictures such as those produced by the AtariArtist and Micropainter programs is 160 by 192 which gives a picture size approximately 110mm by 80mm but, for anyone who may be interested, I am hoping to produce a routine that will double the dimension of the pictures. In the meantime, your STAR LC-10 might at last come alive. Try it!

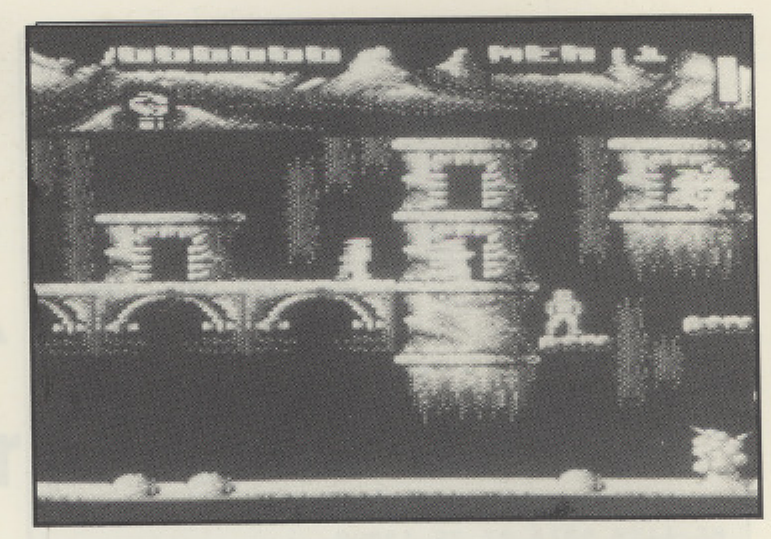


It really is in colour on the LC-10 - promise!

```
EI 1 REM ******************************
GB 2 REM *          LC10DUMP          *
RQ 3 REM *             by             *
DF 4 REM *        John Fildes         *
EC 5 REM * -------------------------- *
UE 6 REM * NEW ATARI USER - December89 *
EO 7 REM ******************************
NN 8 REM
WX 10 REM STAR LC 10 COLOUR DUMP
OE 20 REM FOR 62 SECTOR PICTURE FILES
JT 25 GOSUB 4000:REM INSTRUCTIONS
WG 30 GOSUB 1000:REM INITIALISE
NL 35 GOSUB 5000:REM USR ROUTINE CODE
HR 40 GOSUB 2000:REM LOAD PICTURE
YK 50 GOSUB 3000:REM ALLOCATE COLOURS
KH 100 REM MAIN LOOP
SF 110 FOR ROW=START+39 TO START STEP -1
QX 120 A=USR(ADR(MC$),ROW,ADR(BUFF4$),ADR
   (BUFF3$),ADR(BUFF2$),ADR(BUFF1$))
JC 200 LPRINT SPACE$(1,3):REM NO LINE FEE
   D
LC 205 IF SCR0=22 THEN 215:REM SKIP IF WH
   ITE
TL 210 LPRINT COL1$;INIT$;BUFF1$
ML 215 IF SCR1=22 THEN 225:REM SKIP IF WH
   ITE
VE 220 LPRINT COL2$;INIT$;BUFF2$
NU 225 IF SCR2=22 THEN 235:REM SKIP IF WH
   ITE
WX 230 LPRINT COL3$;INIT$;BUFF3$
LO 235 IF SCR3=22 THEN 250:REM SKIP IF WH
   ITE
YQ 240 LPRINT COL4$;INIT$;BUFF4$
VJ 250 LPRINT SPACE$(4,6):REM LINE FEED
FF 260 NEXT ROW
AL 270 LPRINT RST$
OH 280 END
BM 1000 DIM F$(20),SPACE$(6),INIT$(4),RST
   $(2),SE$(24),MC$(325),COL$(24),COL1$(3
   ),COL2$(3),COL3$(3),COL4$(3)
FD 1010 DIM BUFF1$(192),BUFF2$(192),BUFF3
   $(192),BUFF4$(192):BUFF1$="♥":BUFF1$(1
   92)=BUFF1$:BUFF1$(2)=BUFF1$
IT 1020 BUFF2$=BUFF1$:BUFF3$=BUFF1$:BUFF4
   $=BUFF1$
XD 1030 FOR X=1536 TO 1589:READ A:POKE X,
   A:NEXT X:REM ROUTINE TO LOAD DISK FILE
AG 1040 DATA 104,104,104,141,9,6,162,16,1
   69,7,157,66,3,165,88,157,68,3,165,89,1
   57,69,3,169,0
```

```
IV 1050 DATA 157,72,3,169,31,157,73,3,32,
   86,228,169,12,157,66,3,32,86,228,96,0,
   0,0,0,0,0,0,0,0
WG 1060 FOR X=1 TO 24:READ A:COL$(X,X)=CH
   R$(A):NEXT X
XN 1070 DATA 27,114,0,27,114,1,27,114,2,2
   7,114,3,27,114,4,27,114,5,27,114,6,27,
   114,0
KS 1080 FOR X=1 TO 6:READ A:SPACE$(X,X)=C
   HR$(A):NEXT X:REM LINE FEED COMMANDS
OC 1090 DATA 27,65,0,27,65,8
DA 1100 FOR X=1 TO 4:READ A:INIT$(X,X)=CH
   R$(A):NEXT X:REM SWITCH PRINTER TO GRA
   PHICS MODE
NE 1110 DATA 27,75,192,0
GW 1120 FOR X=1 TO 2:READ A:RST$(X,X)=CHR
   $(A):NEXT X:REM RESET PRINTER
MO 1130 DATA 27,64
IF 1140 FOR X=1 TO 24:READ A:SE$(X,X)=CHR
   $(A):NEXT X:REM SCREEN COLOURS
WR 1150 DATA 0,0,0,3,2,0,6,2,0,4,2,0,1,8,
   0,2,4,0,10,2,0,0,14,0
AT 1160 RETURN
ZJ 2000 REM ATARI USER FEB.1986
SG 2010 ? "Enter file name":? :? "e.g.  D
   :PICTURE"
GC 2020 POSITION 7,20
FC 2030 INPUT F$
DE 2035 IF F$="" THEN F$="D:PICTURE"
NP 2040 IF F$(1,2)<>"D:" THEN GRAPHICS 0:
   GOTO 2010
YN 2050 GRAPHICS 24:POKE 559,0
BJ 2060 DLIST=PEEK(560)+256*PEEK(561)
XO 2070 POKE DLIST+3,78
OD 2080 FOR I=DLIST+6 TO DLIST+198
OL 2090 IF PEEK(I)=15 THEN POKE I,14
GQ 2100 IF PEEK(I)=79 THEN POKE I,78
WT 2110 NEXT I:POKE 559,34
DF 2120 CLOSE #1:OPEN #1,4,0,F$
YT 2130 Q=USR(1536,7)
MY 2140 CLOSE #1
QH 2150 START=PEEK(88)+256*PEEK(89)
AU 2160 RETURN
VS 3000 COL1$=COL$(1,3):COL2$=COL$(16,18)
   :COL3$=COL$(19,21):COL4$=COL$(7,9)
JH 3010 SCR0=1:SCR1=16:SCR2=19:SCR3=7
ZD 3015 SETCOLOR 4,0,0:SETCOLOR 0,2,4:SET
   COLOR 1,10,2:SETCOLOR 2,6,2
HS 3020 CLOSE #1:OPEN #1,4,0,"K:"
GZ 3030 GET #1,K
VY 3040 IF K<49 OR K>52 THEN 3500:REM EXI
   T
LK 3050 K=K-48
YX 3060 ON K GOTO 3100,3200,3300,3400
ME 3100 SCR0=SCR0+3:IF SCR0>24 THEN SCR0=
   1
AW 3110 SETCOLOR 4,ASC(SE$(SCR0,SCR0)),AS
   C(SE$(SCR0+1,SCR0+1))
WD 3120 COL1$=COL$(SCR0,SCR0+2):GOTO 3030
PM 3200 SCR1=SCR1+3:IF SCR1>24 THEN SCR1=
   1
EY 3210 SETCOLOR 0,ASC(SE$(SCR1,SCR1)),AS
   C(SE$(SCR1+1,SCR1+1))
YH 3220 COL2$=COL$(SCR1,SCR1+2):GOTO 3030
SU 3300 SCR2=SCR2+3:IF SCR2>24 THEN SCR2=
   1
LX 3310 SETCOLOR 1,ASC(SE$(SCR2,SCR2)),AS
   C(SE$(SCR2+1,SCR2+1))
AL 3320 COL3$=COL$(SCR2,SCR2+2):GOTO 3030
WC 3400 SCR3=SCR3+3:IF SCR3>24 THEN SCR3=
   1
SW 3410 SETCOLOR 2,ASC(SE$(SCR3,SCR3)),AS
   C(SE$(SCR3+1,SCR3+1))
CP 3420 COL4$=COL$(SCR3,SCR3+2):GOTO 3030
AL 3500 RETURN
RK 4000 GRAPHICS 0:POSITION 6,5
VE 4010 ? "STAR LC.10 COLOUR DUMP"
GC 4020 POSITION 10,7
OD 4030 ? "by J.Fildes - 1989"
AW 4040 POSITION 2,9
MX 4050 ? "Use keys 1-4 to cycle through"
JD 4060 ? "the available colours"
PI 4070 ? "-----------------------------"
DV 4080 ? "Press any other key to print."
DN 4090 ? :? "Initialising machine code d
   ata....":?
AE 4100 RETURN
JP 5000 RESTORE 5100
UZ 5010 FOR X=1 TO 322:READ A:MC$(X,X)=CH
   R$(A):NEXT X
AJ 5020 RETURN
WO 5100 DATA 104,104,133,62,104,133,61,10
   4
TU 5110 DATA 133,60,104,133,59,104,133,58
GD 5120 DATA 104,133,57,104,133,56,104,13
   3
MH 5130 DATA 55,104,133,54,104,133,53,216
TW 5140 DATA 162,0,160,0,169,0,145,53
VF 5150 DATA 145,55,145,57,145,59,177,61
EG 5160 DATA 133,63,165,63,41,3,208,9
ZK 5170 DATA 24,177,53,105,192,145,53,144
OA 5180 DATA 42,165,63,41,2,208,9,24
FA 5190 DATA 177,55,105,192,145,55,144,27
HR 5200 DATA 165,63,41,1,208,9,24,177
YV 5210 DATA 57,105,192,145,57,144,12,24
KO 5220 DATA 177,59,105,192,145,59,144,3
ZF 5230 DATA 24,144,105,165,63,41,12,208
ZF 5240 DATA 9,24,177,53,105,48,145,53
JK 5250 DATA 144,43,165,63,41,8,208,9
KL 5260 DATA 24,177,55,105,48,145,55,144
RT 5270 DATA 28,165,63,41,4,208,9,24
IG 5280 DATA 177,57,105,48,145,57,144,13
YD 5290 DATA 24,177,59,105,48,145,59,24
LF 5300 DATA 144,3,24,144,195,165,63,41
QH 5310 DATA 48,208,9,24,177,53,105,12
DU 5320 DATA 145,53,144,42,165,63,41,32
IG 5330 DATA 208,9,24,177,55,105,12,145
LD 5340 DATA 55,144,27,165,63,41,16,208
YL 5350 DATA 9,24,177,57,105,12,145,57
ZY 5360 DATA 144,12,24,177,59,105,12,145
UJ 5370 DATA 59,144,3,24,144,196,165,63
MZ 5380 DATA 41,192,208,9,24,177,53,105
QR 5390 DATA 3,145,53,144,42,165,63,41
TM 5400 DATA 128,208,9,24,177,55,105,3
ON 5410 DATA 145,55,144,27,165,63,41,64
VJ 5420 DATA 208,9,24,177,57,105,3,145
TC 5430 DATA 57,144,12,24,177,59,105,3
OC 5440 DATA 145,59,144,3,24,144,196,24
WW 5450 DATA 165,61,105,40,133,61,165,62
DB 5460 DATA 105,0,133,62,230,53,208,2
BI 5470 DATA 230,54,230,55,208,2,230,56
LI 5480 DATA 230,57,208,2,230,58,230,59
QQ 5490 DATA 208,2,230,60,232,224,192,208
BH 5500 DATA 211,96,0,0,0,0,0,0
```

GRAB YOUR SHURIKENS



Zeppelin Games look set to top the charts once more with the latest superb addition to their incredible budget range - NINJA COMMANDO.

The game is basically an arcade adventure, the idea being for you to manoeuvre the Ninja Commando - master of the martial arts - through a series of horizontally scrolling levels by jumping and running across various platforms and structures. The Commando starts off without any weapons and must rely on his amazing acrobatic abilities to jump on the numerous enemies he meets. Later on, with several successful 'kills' under his belt your character acquires death stars, grenades, flame throwers and machine guns.

Enemy ninjas appear randomly from openings in nearby buildings but fortunately they are 'non destructive' for the first few seconds. If the Commando gets caught he loses his weapons and must resort to the jumping technique before obtaining any more. The nasties become more of a handful as you go through the levels. To begin with they move in predictable paths and are easily avoided but later become more mobile and harder to out-wit.

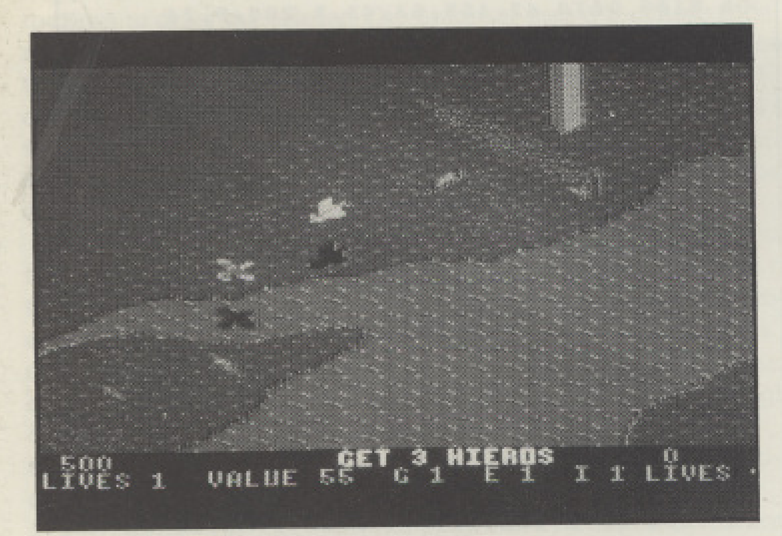
There are eight levels, each with a different graphical backdrop. Needless to say, the scenery is up to the standard of Zeppelin's previous software with the distinctive shading found in Draconus and Zybex used again to good effect. One point that deserves a mention is the super animation of the Ninja Commando. Although rather confusingly coloured to blend in with the background scenery he is very easy to control and can perform some incredible somersaults to jump between the platforms. Music on the title page is, again, excellent although sound effects elsewhere are noticeably lacking. This seems to have become a trend in Zeppelin's recent games and I can't work out the reason for it.

An apparent difference between Ninja Commando and previous Zeppelin Games is the somewhat easier starting level of difficulty. I was able to progress quickly after a couple of attempts - which is more than I can say for either Zybex or Draconus. Of course, the game becomes more challenging on the higher levels and this is just how it should be. Finally, you may be wondering if the price shown below is a mis-print - well, it's not! Zeppelin have triumphed yet again and deserve your support for continuing to show the world which 8-bit micro is best - you know the one!

Title:	**NINJA COMMANDO**
Publisher:	**Zeppelin Games**
Price:	**£2.99 on cassette**
Players:	**1**
Loading:	**15.5 minutes**

Reviewed by Paul Rixon

FLY ME TO THE PYRAMIDS



Atari's support for the XE Games Console continues with another new ROM in the top-priced range. DESERT FALCON is a sort of Blue Max adaptation set in the mysterious depths of the Egyptian desert. You are the Desert Falcon, questing for the hidden treasures of long-forgotten pharoahs.

The game uses the diagonally scrolling graphics technique that was made famous by Sega's Zaxxon and was later used in the classic Blue Max. The scrolling in Desert Falcon isn't quite as smooth as it could be but the overall effect is quite pleasant and the graphics are enhanced by several nice touches. Animation of the Falcon, for instance, is excellent and shadows are used to good effect. Sound - although nothing to get excited about - is beyond major criticism.

Your aim is to collect the Pharoahs' lost treasures - enormous gems, silver eggs and gleaming ingots. To pick them up you must swoop from the sky and hop on top of them - not the easiest of manoeuvres when you're being attacked by waves of angry nasties! Yes, you guessed it, the treasures are guarded by swarms of flying - and crawling - beasts. Burrowing Uwes crawl out of the sand and Vultures, Warrior Phieas, Scarabs, Flying Fish (and even little pink Player Missile graphics) attack you from the sky. Being no ordinary Desert Falcon you can retaliate by firing arrows or you can dodge behind the ancient structures to avoid them. At the end of each desert trek lies a howling Sphinx which can only be destroyed by a direct hit between the eyes. Removing the Sphinx gains you access to a bonus round where the objective is to obtain as many treasures as possible in the limited time allowed.

By collecting hieroglyphics scattered in the sand you can gain special powers such as air bombs, decoys, warps and omnicide capabilities (smart bombs to you and me!). Unfortunately, on the higher levels you can also pick up super problems - but that's all in a day's work for an expert Desert Falcon. Four levels of difficulty from Novice to Expert are included.

Feelings of nostalgia surrounded the testing session of Desert Falcon. Atari seem to be churning out games on ROM that have all the feel and atmosphere of those early ROM classics - not a bad thing in itself, but unfortunately they've also stuck with that equally early habit of overpricing software. If you don't mind the expense, Desert Falcon is well worth checking out.

Title:	**DESERT FALCON**
Publisher:	**Atari Corp.**
Price:	**£14.95 ROM**
Players:	**1/2**
Control:	**Joystick**

Reviewed by Paul Rixon

SUNARO

the natural choice for Atari software

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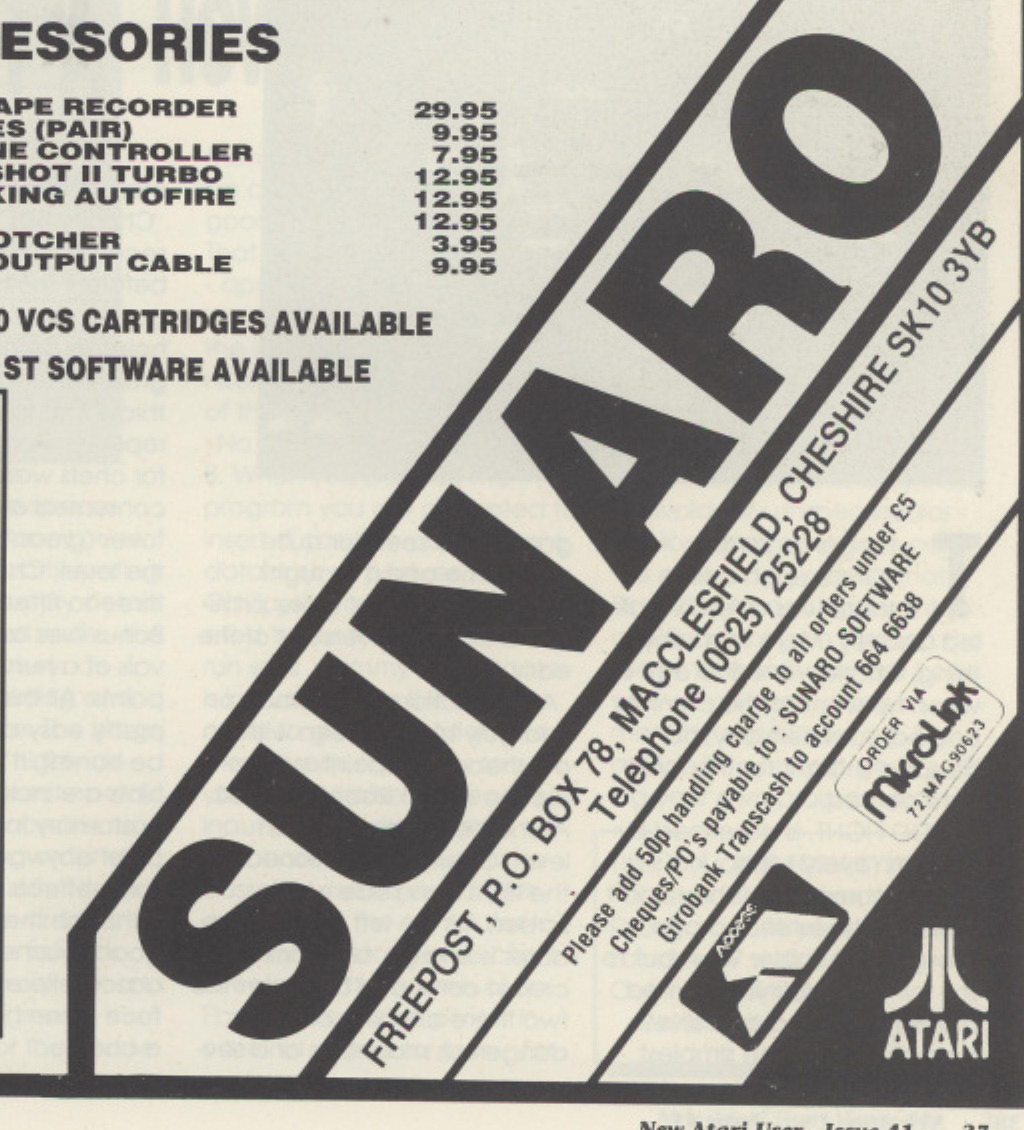
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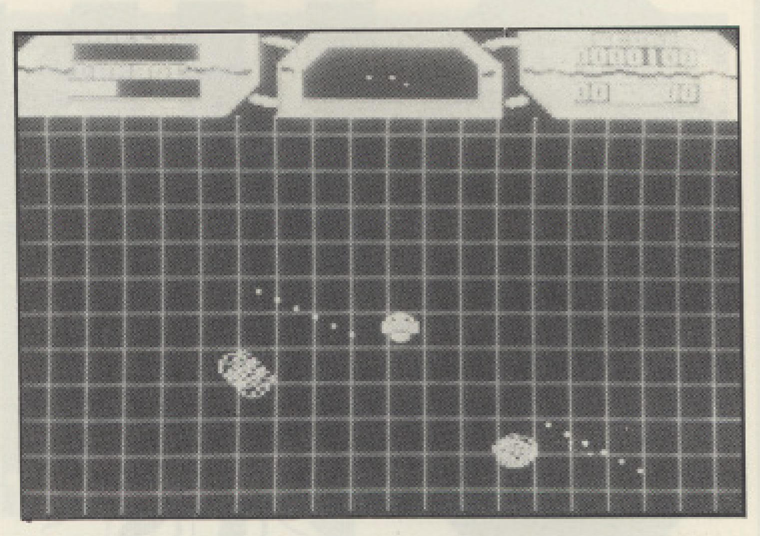
ST SOFTWARE AVAILABLE

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PLUNDERING THE UNIVERSE



COSMIC PIRATE is the first release in what will hopefully be a long line of budget games from Byte Back. It's a shoot 'em up but borders on being an adventure by virtue of the lack of meaningful instructions supplied with the package. The less determined player might throw the game away in frustration!

Why is there an options menu? Why doesn't 'launch' have any effect? What are the simulators for? What's all this about pirates and credits and space trucks? Eventually, after several attempts, some of the pieces fall into place. It seems that you are a Space Pirate who makes his living flying through the Galaxy and plundering 'space trucks' for their cargoes. In each sector of the galaxy you must fight off a variety of aliens to earn credits. The credits may be used to pay for weapons, launch tax, toll tax (no, not poll tax!), and the price of missions. You'd hardly expect a Pirate to settle all his taxes but this Cosmic Pirate doesn't get a choice! The toll must be paid to gain access to a map screen showing the relative positions of space trucks and your own ship. A pleasant piece of music - in contrast to the bulk of the sonics elsewhere - plays while you decide which sector to move into. The general idea is to get closer and closer to a truck and hence the awaiting pile of loot.

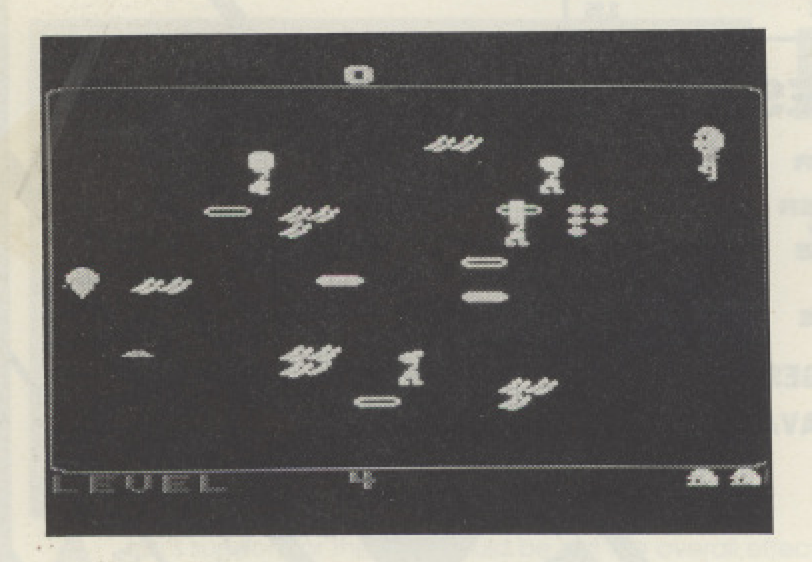
The shoot 'em up is 8-way scrolling and the aliens come in a variety of forms. You are encouraged to conserve ammunition as your 'accuracy' rating is adjusted every time you hit the trigger. Indeed, before you can even embark on a mission you must practice using the battle simulator to bring your rating up to an acceptable level! Further options from the title screen allow you to select particular missions, view your current status, kit out the ship and load or save previous games to tape. Graphics are a bit fuzzy in places but for the most part are acceptable.

I hope Byte Back will provide some decent instructions with their forthcoming software as the lack of useful information supplied with Cosmic Pirate does great damage to its playability. Perseverance reveals an interesting shoot 'em up variety and no doubt some surprises that I've yet to discover. This game has been converted from the ST so if you know an ST owner with Cosmic Pirate you might be able to get some more clues on how to play.

Title:	**COSMIC PIRATE**
Publisher:	**Byte Back**
Price:	**£2.99 cassette**
Players:	**1**
Loading:	**15.5 minutes**

Reviewed by Paul Rixon

A REAL CUSTARD



The game begins. 'Once upon a time there was a fellow called Charley. More than anything, Charley loved to eat. So when he went to the carnival one hot summers day, he headed straight for the food fight contest...'

FOOD FIGHT, is described by Atari as 'every school kid's dream come true'. They don't indicate the intended age group in any other way, but to my mind it's definitely aimed at the younger player. It's actually one of the simplest games I've seen for quite some time and it brought back memories of those primitive arcade conversions of the early 1980's.

All the action takes place on a largely blank screen with an overhead viewpoint, not unlike the old hit Robotron 2084. At the beginning of each level, Charley is positioned on the right hand side of the screen. To the left of the character is a large, beckoning ice cream cone and between the two there are piles of food, dangerous manholes and several unfriendly chefs!

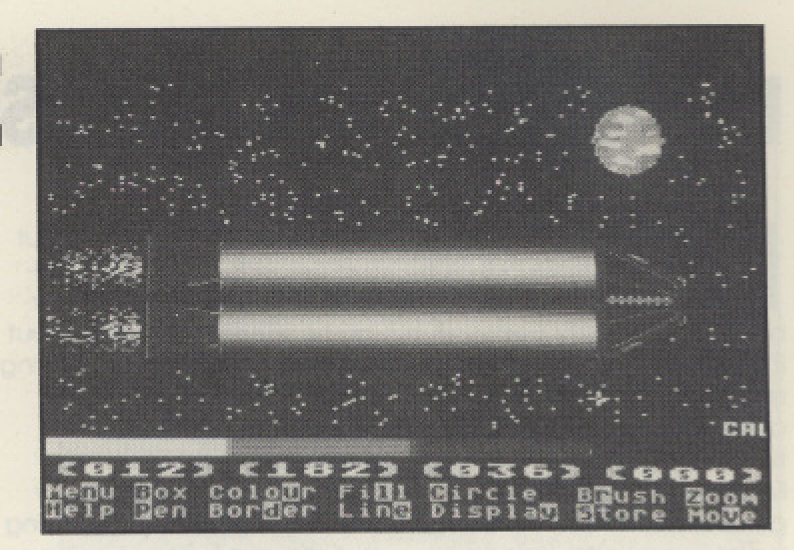
Charley has thirty-two seconds to reach the cone before it melts - avoiding, of course, the chefs and manholes. In defence, he can grab the leftover food and throw it at the chefs for a short reprieve. Points are awarded for chefs walloped, cones consumed and leftovers leftover (groan!). Depending on the level, Charley may have three to fifteen lives in hand. Bonus lives are earned at intervals of a hundred thousand points. All this may sound like a pretty easy challenge, and to be honest, it is - but full playing hints are included on Atari's customary instruction pamphlet anyway! Visual and sonic effects are basic although there are a few good touches - such as the dazed expression on Charley's face when he's clobbered by a chef!

Atari's output of 8-bit games has been quite prolific recently and much of this has been high quality stuff. Sadly, Food Fight isn't up to the same standard. Not only this, but I'm surprised and disappointed that they've released the title as an expensive ROM cartridge. I see no justification for the cost of this game when Atari are selling excellent cassettes such as Black Lamp and Sling Shot for considerably less. Atari may be able to get away with a fifteen pound price tag for the likes of Rescue on Fractalus or Ballblazer but I doubt whether Food Fight will earn them any respect at all.

Title:	**FOOD FIGHT**
Publisher:	**Atari Corp.**
Price:	**£14.95 ROM**
Players:	**1/2**
Control:	**Joystick**

Reviewed by Paul Rixon

WHEN I PAINT MY MASTERPIECE



Feeling creative? If so, Amethyst could have just the thing you need! Although it's been on sale for some time PAINTBOARD, unlike many arcade games, is one of those programs that will not date.

It's a drawing program which, despite being the produce of a small independent software publisher, contains a wide range of powerful features. There are no printed instructions supplied with the package but the program itself has a fairly comprehensive in-built help facility. Most functions can be carried out by a single key press. You can create your artwork using a joystick, a trak-ball (with true 'TB' mode) or even a standard ST mouse. There are two full-screen drawing areas so you can duplicate your masterpiece in memory before attempting any drastic alterations - a convenient safeguard. You could also use the second area to keep a library of commonly used shapes or symbols, and copy them across when required.

Most of the commands are familiar ones - box, circle, line, mirror, two-stage zoom are just a few of those included. You can also add text to your picture, move pieces around the screen, flip sections upside-down and even switch on the cassette drive for musical inspiration from your favourite audio tape! The program makes use of DLI's (like Graphics Art Department) so that any one 'pen' can have a different colour at each vertical screen position. 128 colours are possible, although others can be formed by mixing the existing shades. A variety of different brush sizes and speeds are provided plus an Airbrush effect for that artistic 'spray can' look!

Paintboard is supplied, as all of Amethyst's software, on a TDK D60 cassette. Side one of the tape contains the master machine code program followed by several demonstration pictures. On the reverse side there's a collection of utility routines written in Basic which can be adapted for use in your own programs. One such routine converts files between Paintboard and conventional formats and another allows you to dump pictures in colour to an Atari 1020 plotter - the results are good for those prepared to wait literally hours for this process to complete!

Overall, I'm impressed by the depth and quality of Paintboard. My only criticism is that it doesn't support a disk drive - perhaps a worthwhile enhancement for the future? For all those cassette based owners, this has to be a 'best buy' for Christmas '89.

Title: **PAINTBOARD**
Publisher: **Amethyst Software**
Price: **£6.99 cassette**
Loading: **9.5 minutes**
Control:

Reviewed by Paul Rixon

HOW TO BEAT THE BOOKIES

RACE COURSES

Ascot	Hamilton	Redcar
Ayr	Haydock	Ripon
Bangor	Hereford	Salisbury
Bath	Hexham	Sandown
Beverley	Huntingdon	Sedgefield
Brighton	Kelso	Southwell
Carlisle	Kempton	Stratford
Cartmel	Leicester	Taunton
Catterick	Lingfield	Teesside
Cheltenham	Liverpool	Thirsk
Chepstow	Ludlow	Towcester
Chester	Market Rasen	Uttoxeter
Devon	Newbury	Warwick
Doncaster	Newcastle	Wetherby
Edinburgh	Newmarket	Wincanton
Epsom	Newton Abbot	Windsor
Fakenham	Nottingham	Wolvhmton
Folkstone	Perth	Worcester
Fontwell	Plumton	Yarmouth
Goodwood	Pontefract	York

Where did BIG BOY..... last run?

Two separate but related programs from budget software specialists Blue Ribbon designed to help you make 'loadsamoney' - TURF-FORM is a horse racing forecaster for UK Flat and National Hunt races and SYSTEM-8 is a Football Pools predictor covering the four English and three Scottish football divisions.

Of the two releases, TURF-FORM is the most straightforward. It comprises, quite literally, of six questions which you are required to answer by obtaining the relevant information from a newspaper. After selecting a racecourse and naming the participating horses you must supply details of each horse's last race - the location, prize money, distance, weight, placing and time elapsed since. The program then uses its "highly developed and accurate prediction routine" to place the runners in descending order of their likelihood to win. Fitness and speed ratings are also given. If the fitness rating is 'very good' or 'excellent' and the speed rating greater than the fixed figure for the course then the horse concerned can be considered to have a good chance of winning. That's basically all there is to it - apart from a colourful drawing of a horse displayed after the loading sequence. Definitely the graphical highlight of the package!

No such gimmicks in SYSTEM 8. When you boot up the program you are prompted to insert a cassette containing a database of past results. Obviously you won't have created this until after the initial run so a 'dummy' set of data is included after the main code to get you started. From the subsequent menu screen you can initialise the leagues, input past results into the database, save the data to cassette, create match lists and instruct the computer to make selections. These can be directed to the screen or an Epson compatible printer in either list or tabular form - for direct copying to the Pools coupon. The selection process uses past performance to predict future results, so at least four weeks of previous match data must be entered before any level of accuracy can be expected.

Like Turf-Form, System 8 is a relatively simple program which carries out its duty in an unavoidably unspectacular fashion. Both packages carry the necessary warning that Blue Ribbon don't guarantee any financial gain through the use of their software but hope you will gain some amusement by experimenting. My advice is to have a go at writing your own program first!

Title: **TURF-FORM/SYSTEM 8**
Publisher: **Blue Ribbon**
Price: **£2.99 each cassette**
Loading: **7 mins/3.5 mins**
Control: **Keyboard**

Reviewed by Paul Rixon

NO MATCH FOR BORIS

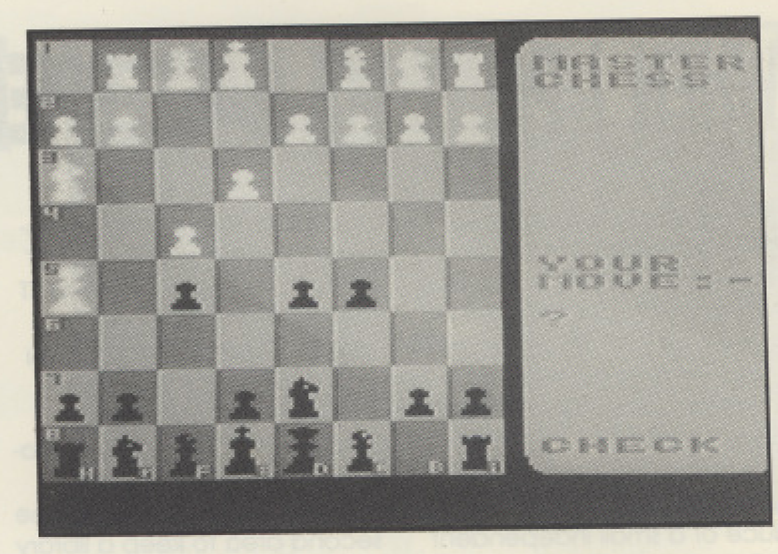
MASTERCHESS isn't a new release but it deserves a mention nonetheless, if only because it's one of the few software releases I've ever seen with a completely accurate description printed on the packaging! Mastertronic summarise the game as a 'no frills chess playing program' and, indeed, that's exactly what it is!

According to Mastertronic, the possibility of a 3-D display was investigated at the time of development, but later discarded for reasons of memory consumption. Instead, the graphics are in a more traditional overhead perspective and, whilst this is anything but spectacular, it is also reasonably clear and not too wearing on the eyes. Shame about the sound though - an irritating beep every time a piece is moved!

There aren't any levels as such but the difficulty factor can be adjusted by specifying the allowed quota of computer 'thinking time'. This can be set at almost any whole number, although realistically you have got to seek a compromise between the skill of the computer and the length of its response time. If you get tired of waiting you can interrupt the computer's thinking and force it to play its best move at that time. You can also toggle a display of the captured pieces on and off as you wait.

Standard algebraic notation is used throughout for entering moves. Although I'd would prefer a 'user-friendly' joystick option, the keyboard method doesn't take too much getting used to. All of the usual chess moves are implemented, including castling and en passant. Set-up mode enables the simple construction of any board layout - useful for solving those 'white to mate in two' type problems. Unfortunately, the program doesn't check to see whether your set-up is entirely sensible, so if you decide to resume a game with five kings on the board and no opposition, the computer simply locks up in a state of confusion! Reset can be used to escape on such occasions. The remaining options allow you to load and save game positions - a necessity in a game of this nature - and to view an instant match replay.

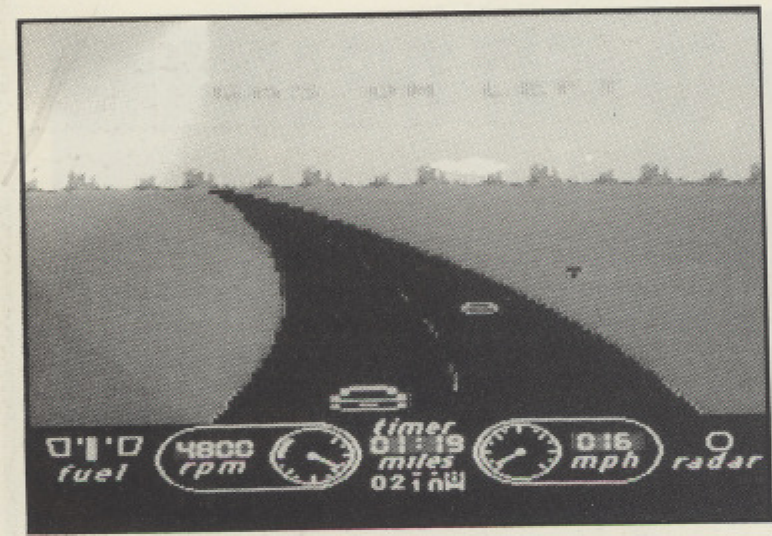
There's not really a lot more I can say about Masterchess, except that it works and that it's well worth checking out. You wouldn't expect to find the advanced features of Colossus or Chessmaster at this price and you don't get them but you do get a highly playable, straightforward chess game. What's more, you may even be able to beat it too!



Title:	**MASTERCHESS**
Publisher:	**Mastertronic**
Price:	**£1.99 on cassette**
Players:	**1**
Control:	**Keyboard only**

Reviewed by Paul Rixon

TREKKING ACROSS THE USA



Nothing new has arrived from the Silverbird stable recently but it presents an opportunity to look back at a previous release which might otherwise have gone unnoticed. Remember The Great American Cross Country Road Race, first reviewed in PAGE 6 issue 21? Did you know that you can now pick it up for under two pounds, thanks to Silverbird?

Unlike its more aged rivals, the AMERICAN ROAD RACE is not based around a track but, as the name suggests, involves a dash across the states of America. From the start you've a choice of four different routes, from a straightforward run from West to East to a more time consuming round trip through all the major cities. A map is displayed so you can select the most appropriate route, bearing in mind the weather and road conditions and the time of day.

The screen view is pretty similar to the much quoted Pole Position, although buildings on the horizon - which change to reflect the particular locations - and general scenery in the background gives Road Race a clear edge over its predecessors. Not quite so remarkable is the definition of the many vehicles involved, although, as you attempt to weave past other motorists at up to 240 miles an hour, the paintwork of your motor will hardly seem important! Listen out for the Police siren and be ready to take evasive action or you may be detained for reckless driving! You should also keep a watchful eye on the fuel gauge as you'll need to stop for a fill-up at frequent intervals in the race.

The driving controls are more advanced than in previous race games - you not only have steering and brakes to contend with but four gear selections as well! Forget to watch the revs closely and you may end up 'pushing' your car to the nearest garage! It's also important not to let that huge excess of power get the better of you as any contact with other vehicles is bound to cause considerable delay. There are plenty of dials on the dash to keep you occupied and varying patterns of traffic ensure that you'll never hit a dull moment as you race for a slot in the highscore table. There are many more features to the game than I could possibly describe here, but all are adequately explained in an instruction sheet included.

American Road Race is, without doubt, one of the all-time greats of Atari programs and due credit must go to Silverbird for bringing it back to the market at an almost giveaway price. Don't hesitate - buy it!

Title:	**AMERICAN ROAD RACE**
Publisher:	**Silverbird**
Price:	**£1.99 on cassette**
Players:	**1**
Control:	**Joystick**

Reviewed by Paul Rixon

STARS

by Edward Brooksbank

This small program creates a three speed, full screen starfield using only one sprite and runs in the display list interrupt. Just type in the program, SAVE a copy and then RUN it. A counter will appear and when it reaches zero your screen will turn into a starfield.

Here's what each line does

Line 1 - POKEs the machine code for the DLI (Display List Interrupt) into page 6 of memory

Line 2 - contains the DATA for the DLI

Line 3 - sets up the sprite information and has the remainder of the DATA statements

Line 4 - POKEs data for the actual stars into memory, along with random horizontal values for each star

Line 5 - activates the starfield by turning on the DLI

```
EX 1 REM ################################
FY 2 REM #            STARS             #
BT 3 REM #  A NEW ATARI USER QUICKIE    #
IF 4 REM #     by Edward Brooksbank     #
FB 5 REM ################################
FG 10 ? CHR$(125):POKE 710,0:FOR A=1536 T
   O 1536+33:READ B:POKE A,B:NEXT A:POKE
   512,0:POKE 513,6:POKE 53256,0
CB 11 DATA 72,162,216,189,0,129,56,253,0,
   130,157,0,129,141,10,212,141,0,208,42,
   41,240,9,15,141,18,208,202,224
VD 12 POKE 54279,128:POKE 53277,3:POKE 55
   9,62:POKE 623,1:D=PEEK(560)+256*PEEK(5
   61):POKE 752,1:DATA 0,208,227,104,64
UO 13 POKE D,143:FOR A=32768 TO 33023:POK
   E A+256,PEEK(53770):POKE A+512,INT(RND
   (0)*3)+1:POKE A+1024,1
DV 14 ? "↑";33023-A;"  ":NEXT A:FOR A=708
    TO 712:POKE A,0:NEXT A:POKE 53774,0:P
   OKE 54286,192
```

Would you like to see more five-liners that you can type in quickly and easily for some spectacular effects? We would, but although we inherited a lot of five liners from Atari User almost all were very, very basic and of limited interest so, if we are to resurrect the five-liner, we will have to change the rules.

Firstly we will change the concept to 'QUICKIES' and extend the size of the programs to a maximum of TEN LINES (less if you want). Secondly, the programs must contain MACHINE CODE routines, unless you can do something brilliant in BASIC. Thirdly the listing must be documented as in this issue's listing. We are mainly interested in graphics or sound demos and all programs should be submitted on disk with return postage if you want the disk back.

We will pay £10 for each program published, so send in your QUICKIES to NEW ATARI USER, P.O. BOX 54, Stafford, ST16

14.
THE SCREEN EDITOR

Having problems with your listings? Ian Finlayson gives some tips for easier typing and debugging

This time I am not actually going to produce any useful subroutines, but I hope the tutorial will be useful anyhow as there is little documentation around to help the beginner find quick ways of doing some often simple tasks. The screen editor of the Atari 8 bit computers is quite a powerful tool and can be used to facilitate some of these tasks. It has capabilities that users of office PCs don't have in their MSDOS environment.

"What is a screen editor?" you may ask. It is the interaction of keyboard and screen display. You are using it when you type in a Basic program, for instance. I will assume you are familiar with the fundamental controls which move the cursor, insert and delete lines and characters and clear the screen as these are included in the very meagre handbook that comes with the Atari computers, and going on from these will try to show you some useful short cuts.

MULTIPLE LINES

In many programs there are quite a few lines which almost repeat each other. It seems pretty tedious to have to type them again and again and there is an easier way. Try this example.

a. Type one line as follows:

```
10 REM *** THIS IS LINE 1
```

b. Now hit [RETURN] then move the cursor with the CONTROL key and 'up arrow till it is over the 1 of "10", type 2 over the 1 then move the cursor right till it is over the 1 of "LINE 1" and overtype this with a 2 as well.

c. Hit [RETURN] again. It appears that we have replaced the line 1 we first typed with one that reads:

```
20 REM *** THIS IS LINE 2
```

d. Type LIST and hit [RETURN], and you will see that the original Line 10 has not been deleted.

e. Repeat b to generate lines 30,40,50 and 60, then clear the screen ([CONTROL]+[CLEAR]) and LIST again to display the lines.

This process works even when the lines that are repeated are not immediately one behind the other. If you get to a line anywhere in a program listing that is close to one that has already been typed, just bring the previous occurrence back onto the screen by LIST (linenumber), then edit it in the same way as the example above. One word of caution, do not forget to change the line number as well as making any changes to the text within the line, otherwise you will find that you have changed the original line instead of generating a new one - it may sound stupid but it is quite easy to make this error, particularly when generating a whole lot of lines which are very similar.

The technique of overtyping one line to generate another is particularly useful in generating screen layouts. Take care in laying out the first line that is to be displayed, and then use this method to ensure that all subsequent lines are spaced the same way.

SELECTING SPECIFIC LINES

If you wish to pick up specific parts of one program for use in another this can be done by **LIST**ing the lines to tape or to a disk file and then **ENTER**ing them back into the new application. This is satisfactory if all the lines you require are in one block, but is more tedious if you want to pick up several lines which are not together. The screen editor can help here as well, as long as the lines you require can all be displayed together on one screen. Follow this example:

a. Clear the screen and then LIST the previous example (lines 10 to 60).

b. Type NEW [RETURN] and then LIST [RETURN] to show the program lines have all been deleted from memory.

c. Now move the cursor up to line 10 and hit [RETURN], then move the cursor to line 30, hit [RETURN], and line 50 [RETURN].

d. Clear the screen and LIST. You will see that the lines on which we hit return have been captured that is 10,30 and 50 while those which were merely cursored over have remained deleted.

DIRECT MODE

The editor can also be used effectively in direct mode. For example if you wish to load a file from disk and save it to another disk just type in direct mode:

```
LOAD "D:FILENAME.EXT"
```

When the file is loaded, swap the disk over, move the screen cursor up and overtype LOAD with SAVE and save the file to the new disk with the same file name.

If you are a disk user you can even use this technique when in DOS. Perhaps you have typed L to load a binary file followed by FILENAME.EXT and you get ERROR 170 (File not found). It is likely that you have typed in the name wrong so cursor up to the

L and hit [RETURN] then move the cursor and overtype any corrections to the file name. Hit [RETURN] again and your file will load - as long as the spelling is now correct and the file is on the disk! This can be quicker and easier than typing the whole filename again.

DEBUGGING

Now to diversify a little. Whether you write your own programs or just type in the programs that are given in magazines some means of finding bugs when the program does not run will be useful. There are some utilities available which allow you to trace through a program and follow the progress of all the variables, but here is an alternative that will allow you to home in on those parts of programs which cause errors or anomalies. Despite what I said in the opening paragraph of this article I will use a very short subroutine.

If you look at the listing the first line (100) is merely there to point to the subroutine. This line must be renumbered to go into your program a few lines before the place where the problem seems to be occurring. Choose a line number in between the line numbers of the program so that the program itself is not inadvertantly changed.

The subroutine at line 32000 simply clears the screen using a Graphics 0 command, and then prints out the program variables. You will have to change the A,B,C and A$,B$,C$ and insert all the relevant important variables in the program you wish to debug. Once the variables are printed the STOP command is encountered, which prevents the program running on before the values of the variables have been studied.

So when you RUN the program it will jump from line 100 (or whatever you have renumbered it) to the subroutine which displays the current value of all the variables. A close comparison of the variable values against the expected values will usually give a clue as to what is going wrong.

If nothing seems to be wrong, move the exit point (the original line 100) to another position a bit further through the program. This can be done by listing the line, overtyping the line number and then deleting the old line number, thus using the screen editor to help with your debugging!! (You were wondering what all this talk about debugging had to do with the screen editor, weren't you?). Once you find the offending line it can be amended in a similar way.

In some simple programs it is possible to go on from the point at which the program stops by typing CONT [RETURN], but usually the GR.0 call will disrupt the program flow to an extent that means you have to RUN again from the beginning.

TAPE DATABASE UPDATE

Now a totally different subject, back to the database of the last four tutorials. Thank you for the many letters that you have sent. I hope that I will have replied to all who have sent return stamped envelopes with their queries by the time this is published, and I apologise that some of you have had to wait a while for replies. Only one correspondent found the mistake in the last listing - look at line 3026 - the GOTO linenumber (3005) is nonexistant. It should be 3020!

Quite a few of you have had the program crash in the sort subroutine. In most cases this has been because you have tried to sort zero or one record! If there are two or more records in memory it works OK. To stop the problem here is a crash proofing fix, change line 3000 to read as shown in the inset. This will prevent the program from trying to do a sort if there are less than two records.

```
EI 1 REM ********************************
WP 2 REM *    TUTORIAL SUBROUTINES      *
XC 3 REM *          14. DEBUG           *
LS 4 REM *              by              *
WL 5 REM *        Ian Finlayson         *
ED 6 REM * ---------------------------- *
UF 7 REM * NEW ATARI USER - December89 *
EP 8 REM ********************************
NO 9 REM
UB 100 GOTO 32000:REM RENUBER THIS LINE
                  WITH LINE # CLOSE
                  BEFORE ERROR OCCURS
XY 32000 GRAPHICS 0:? "↓↓A = ";A,"B = ";B
   ,"C = ";C
MJ 32010 ? "A$ = ";A$,"B$ = ";B$,"C$ = ";
   C$
AV 32020 STOP :RETURN
```

Above - the subroutine to help with debugging your programs

```
EI 1 REM ********************************
WP 2 REM *    TUTORIAL SUBROUTINES      *
BI 3 REM *  ADDRESS BOOK AMENDMENTS     *
LS 4 REM *              by              *
WL 5 REM *        Ian Finlayson         *
ED 6 REM * ---------------------------- *
UF 7 REM * NEW ATARI USER - December89 *
EP 8 REM ********************************
NO 9 REM
ED 3000 N=LEN(DAT$)/115:IF N>1 THEN 3003
OU 3001 ? "↰↓↓↓CAN NOT SORT LESS THAN TWO
    RECORDS":? "↓↓↓PRESS A KEY TO CONTINU
   E"
YI 3002 GOSUB KEYPRESS:RETURN
WY 3003 ? "↰":? "          *****  SORT MENU 
   *****":? :?
PQ 3026 GOTO 3020
```

Amendments to the cassette database

Well, that's it for this time - keep those letters coming. I would be pleased to hear from you concerning the Tutorial articles and any problems you have with Basic programming. Please don't ask me to help with assembler and machine code, it is a waste of your letter and stamp!

**My address is: Ian Finlayson,
60 Roundstone Crescent, East Preston,
West Sussex, BN16 1DQ**

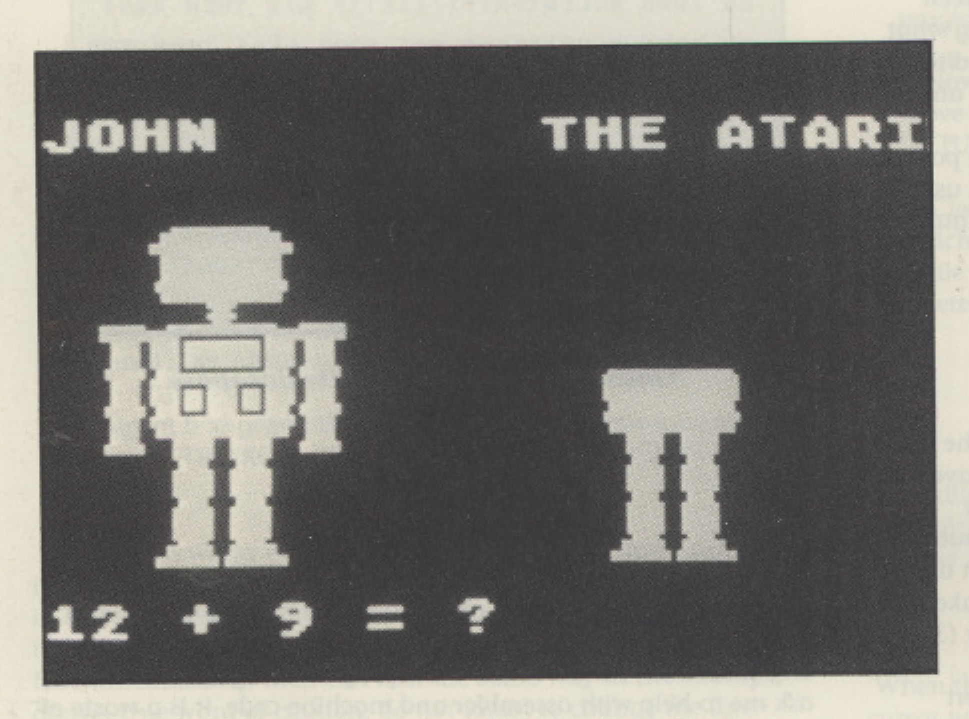
PICMATICS

EDUCATIONAL FUN FOR YOUNGSTERS

Picmatics is an educational program aimed at young computer users or older ones who like the challenge of numbers.

The program presents three levels of difficulty on each of the main four mathematical disciplines, addition, subtraction, multiplication and division. If you answer a question correctly a little bit of the picm grows, while a wrong answer means that the Atari's picture grows. The aim is to try and finish your picture before the computer. The program uses 2 pictures - a boat and a robot - which are generated randomly. These are drawn on a mode 7 screen and each takes 12-14 turns to complete.

That's all there is to Picmatics but it should prove both entertaining and educational to your children.



by Ann O'Driscoll

```
EI 1 REM *********************************
JC 2 REM *         PICTURE MATHS          *
RQ 3 REM *              by                *
NI 4 REM *        Ann O'Driscoll          *
EC 5 REM * ------------------------------ *
UE 6 REM * NEW ATARI USER - December89 *
EO 7 REM *********************************
NN 8 REM
CW 49 REM  SET UP AND MENU  50 - 200
SN 50 DIM NAM$(10),A$(10),B$(9),BL$(39),S
   IGN$(6),G$(6):BL$(1)=" ":BL$(39)=" ":B
   L$(2)=BL$:G$="HELLO ":B$="THE ATARI"
AH 60 ASK=300:BRK=350:RIGHT=400:WRONG=450
   :PIC=500:GRAPHICS 0:POKE 702,64:POKE 6
   94,0:GOSUB BRK:GOSUB 1000
CH 70 DAT1=0:DAT2=DAT1:DAT=DAT1:II=INT(RN
   D(0)*2)+2:INFO=II*1000
GJ 80 GRAPHICS 17:GOSUB BRK:DL=PEEK(560)+
   256*PEEK(561):FOR N=7 TO 9:POKE DL+N,2
   :NEXT N:POKE DL+3,71
ZQ 90 POKE 708,92:POKE 709,206:POKE 710,0
   :POKE 711,138:L=1:Y=12:GOSUB 230:POSIT
   ION 0,0:IF GR THEN G$="OK "
HQ 100 ? #6;G$;A$:? #6:? #6;"What kind of
    sums would you like? Press SELECT for
    a category or OPTION for a"
RR 110 ? #6;"new level. Press START to be
   gin.":POSITION 5,12:? #6;"adding":? #6
   ;"     subtracting"
AN 120 ? #6;"      multiplying":? #6;"
    dividing":COLOR 3:PLOT 4,19:DRAWTO 4,
   23:DRAWTO 15,23:DRAWTO 15,19
YC 130 DRAWTO 4,19:COLOR 131:PLOT 2,10:DR
   AWTO 2,17:DRAWTO 17,17:DRAWTO 17,10:DR
   AWTO 2,10:POSITION 4,Y:? #6;"*"
GR 140 IF PEEK(53279)=6 THEN 250
UJ 150 ON PEEK(53279)=5 GOSUB 200:ON PEEK
   (53279)=3 GOSUB 220:GOTO 140
NI 200 FOR D=1 TO 15:SOUND 0,20,10,10:NEX
   T D:SOUND 0,0,0,0:YY=Y+1:IF YY>15 THEN
    YY=12
HY 210 POSITION 4,Y:? #6;" ":POSITION 4,Y
   Y:? #6;"*":Y=YY:RETURN
OA 220 FOR D=1 TO 15:SOUND 0,50,10,12:NEX
   T D:SOUND 0,0,0,0:L=L+1:IF L>3 THEN L=
   1
FE 230 POSITION 7,21:GOTO 230+L*2
PY 232 ? #6;" easy":L1=15:L2=10:L3=6:LE=2
   :RETURN
IP 234 ? #6;"medium":L1=35:L2=25:L3=10:LE
   =9:RETURN
UB 236 ? #6;" hard ":L1=75:L2=65:L3=12:LE
   =13:RETURN
OJ 250 GRAPHICS 7:DL=PEEK(560)+256*PEEK(5
   61):SC=PEEK(88)+256*PEEK(89):POKE DL+3
   ,71:POKE DL+6,6:POKE DL+85,71
YW 260 FOR N=88 TO 90:POKE DL+N,6:NEXT N:
   POKE 708,14:POKE 709,56:POKE 710,28:PO
   KE 712,0:GOSUB BRK
HI 270 FOR N=1 TO LEN(A$):POKE SC+N-1,ASC
   (A$(N,N))-32:NEXT N:FOR N=1 TO 9:POKE
   SC+10+N,ASC(B$(N,N))-32:NEXT N
DL 280 LN=550+(Y-11)*50:GOTO LN
YX 299 REM  ASK SUM ROUTINE  300-310
SV 300 TRAP 310:POKE 764,255:? CHR$(125);
   N1;SIGN$;N2;" = ";:INPUT ANS:RETURN
FL 310 ? CHR$(253):? CHR$(125);:? "number
   s only please":FOR D=1 TO 500:NEXT D:G
   OTO 300
MA 349 REM  SOUND + DISABLE BREAK 350
LU 350 POKE 16,64:POKE 53774,64:FOR P=100
    TO 0 STEP -4:SOUND 0,P,10,12:NEXT P:R
   ETURN
EM 399 REM  RIGHT OR WRONG 400 + 450
QP 400 DAT1=DAT1+10:DAT=DAT1:X=0:H=3:P=50
   :GOSUB PIC:GOTO LN
VY 450 DAT2=DAT2+10:DAT=DAT2:X=80:H=2:P=2
   00:GOSUB PIC:FOR D=1 TO 800:NEXT D:GOT
   O LN
IP 499 REM  DRAW PIC ROUTINE 500-550
```

```
KY 500 COLOR H:SOUND 0,P,10,12:RESTORE DA
   T+INFO:READ R:IF R<8 THEN 520
UM 510 READ R2:FOR N=0 TO R2:READ A,B:PLO
   T A+X,R-N:DRAWTO B+X,R-N:NEXT N
KR 520 IF R=5 THEN COLOR 0:FOR N=1 TO 3:R
   EAD A,B:PLOT A+X,B:FOR M=1 TO 4:READ C
   ,D:DRAWTO C+X,D:NEXT M:NEXT N
UX 530 IF R<4 THEN READ R2:COLOR 1:FOR N=
   1 TO R2:READ A,B,C,D:PLOT A+X,B:DRAWTO
    C+X,D:NEXT N
RL 540 FOR D=1 TO 20:NEXT D:SOUND 0,0,0,0
   :IF R<>0 THEN RETURN
ND 550 POP :GOTO 800
HM 599 REM  SUMS AT  600 - 770
LJ 600 N1=INT(RND(0)*L1)+LE:N2=INT(RND(0)
   *L2)+LE:IF N1+N2=ANS THEN 600
VI 610 SIGN$=" + ":GOSUB ASK:IF ANS=N1+N2
    THEN GOTO RIGHT
LJ 620 ? CHR$(125);N1;SIGN$;N2;" = ";N1+N
   2:GOTO WRONG
CC 650 N1=INT(RND(0)*L1)+LE*2:N2=INT(RND(
   0)*L2)+LE:IF N1<N2 OR N1-N2<LE OR N1-N
   2=ANS THEN 650
ZM 660 SIGN$=" - ":GOSUB ASK:IF ANS=N1-N2
    THEN GOTO RIGHT
UN 670 ? "+";N1;SIGN$;N2;" = ";N1-N2;BL$:
   GOTO WRONG
YO 700 N1=INT(RND(0)*L3)+L*2:N2=INT(RND(0
   )*L3)+L+1:IF N1*N2=ANS THEN 700
QM 710 SIGN$=" X ":GOSUB ASK:IF ANS=N1*N2
    THEN GOTO RIGHT
QP 720 ? "+";N1;SIGN$;N2;" = ";N1*N2;BL$:
   GOTO WRONG
DT 750 N1=INT(RND(0)*L3)+3:N2=(INT(RND(0)
   *L3)+3)*N1:IF N2/N1=ANS OR N2/N1<=L*2
   THEN 750
WJ 760 SIGN$=" INTO ":GOSUB ASK:IF ANS=N2
   /N1 THEN GOTO RIGHT
WV 770 ? "+";N1;SIGN$;N2;" = ";N2/N1;BL$:
   GOTO WRONG
ZK 799 REM  GAME OVER  800 - 850
HQ 800 FOR P=100 TO 0 STEP -2:PP=PEEK(708
   ):SOUND 0,P,10,12:POKE 708,PEEK(709):P
   OKE 709,PEEK(710)
VG 810 POKE 710,PP:NEXT P:NAM$=A$:IF DAT2
   =DAT THEN NAM$=B$
UL 820 ? CHR$(125);NAM$;" WINS!":FOR D=1
   TO 300:NEXT D:? CHR$(125);"PLAY AGAIN
   (Y/N)?"
NP 830 FOR D=1 TO 200:IF PEEK(764)<>35 AN
   D PEEK(764)<>43 THEN NEXT D:GOTO 820
IJ 840 POP :IF PEEK(764)=43 THEN GR=1:POK
   E 764,255:GOTO 70
PT 850 POKE 764,255:POKE 82,2:GRAPHICS 0:
   END
JL 999 REM  INTRODUCTION  1000 - 1100
OV 1000 DL=PEEK(560)+256*PEEK(561):POKE D
   L+6,6:POKE DL+7,7:POKE DL+10,6:POKE DL
   +12,7:POKE 752,1:POKE 82,0
BO 1010 POKE 708,142:POKE 709,222:POKE 71
   0,0:POKE 711,138:POSITION 14,0:? "WELC
   OME TO":POSITION 23,1
JM 1020 ? "PICTURE MATHS":POSITION 2,4:?
   "test your brain":POSITION 21,5:? "aga
   inst the atari":POSITION 0,9
OB 1030 ? "The ATARI will ask you some su
   ms. Type  your answer and press RETURN
    -If you are";
UI 1040 ? "right your picture will grow,
   but if youget a sum wrong then the ATA
   RI's picturegrows, ";
JY 1050 ? "because it knows all the answe
   rs.Try to finish your picture first!"
YC 1060 POSITION 0,17:? "Please type your
    name and press RETURN":? :INPUT #16;N
   AM$:IF NAM$="" THEN 1060
AN 1070 FOR N=1 TO LEN(NAM$):IF ASC(NAM$(
   N,N))>31 AND ASC(NAM$(N,N))<91 THEN 11
   00
UB 1080 ? CHR$(253):POSITION 0,19:? "Use
   CAPITALS only please!              ":
   FOR D=1 TO 700:NEXT D
NO 1090 POSITION 0,19:? BL$;BL$:GOTO 1060
PP 1100 NEXT N:A$=NAM$:RETURN
WA 2000 REM  BOAT DATA
ML 2010 DATA 64,7,16,60,15,61,14,62,13,63
   ,12,64,11,65,10,66,9,67
EK 2020 DATA 56,9,8,68,7,69,6,70,5,71,26,
   50,26,50,26,50,26,50,26,50,26,50
MU 2030 DATA 3,8,38,46,38,4,39,46,39,4,40
   ,46,40,4,17,64,59,64,6,53,70,53,26,46,
   50,46,26,52,26,47,50,52,50,47
ZI 2040 DATA 5,29,50,32,50,32,48,29,48,29
   ,50,36,50,39,50,39,48,36,48,36,50,43,5
   0,46,50,46,48,43,48,43,50
DG 2050 DATA 44,11,4,35,5,35,6,37,7,37,8,
   35,9,35,10,35,11,35,12,35,13,35,14,35,
   15,35
AE 2060 DATA 32,9,16,35,17,35,18,35,19,35
   ,20,35,21,35,22,35,23,35,24,35,25,35
YO 2070 DATA 22,9,26,35,27,35,28,35,29,35
   ,30,35,31,37,32,37,33,35,34,35,35,35
JS 2080 DATA 36,7,43,74,43,73,41,72,41,71
   ,43,70,43,69,43,68,43,67
RK 2090 DATA 28,7,43,66,43,65,43,64,43,63
   ,43,62,43,61,43,60,43,59
EE 2100 DATA 20,7,43,58,43,57,43,56,43,55
   ,43,54,43,53,43,52,43,51
DZ 2110 DATA 12,7,43,50,43,49,43,48,43,47
   ,41,46,41,45,43,44,43,43
LI 2120 DATA 0,11,4,44,35,13,74,36,43,5,3
   1,4,37,4,31,4,31,7,31,7,37,7,16,64,5,5
   3,60,64,71,53
EN 2125 DATA 43,36,43,5,35,44,35,13,4,44,
   34,44,44,36,74,36
PY 3000 REM  ROBOT DATA
OI 3010 DATA 72,11,20,30,20,30,22,29,22,2
   9,24,28,23,29,23,29,23,29,23,29,23,29,
   23,29,24,28
XF 3020 DATA 72,11,32,42,32,42,33,40,33,4
   0,34,38,33,39,33,39,33,39,33,39,33,39,
   33,39,34,38
JI 3030 DATA 60,11,24,28,23,29,23,29,23,2
   9,23,29,23,29,24,28,24,28,23,29,23,29,
   23,29,23,29
EZ 3040 DATA 60,11,34,38,33,39,33,39,33,3
   9,33,39,33,39,34,38,34,38,33,39,33,39,
   33,39,33,39
GT 3050 DATA 48,11,20,42,20,42,19,43,19,4
   3,20,42,20,42,19,43,19,43,19,43,19,43,
   19,43,20,42
XA 3060 DATA 36,11,20,42,19,43,19,43,19,4
   3,19,43,19,43,18,44,18,44,22,40,30,32,
   29,33,30,32
OT 3070 DATA 39,11,12,16,12,16,11,17,11,1
   7,12,16,12,16,12,16,12,16,12,16,10,17,
   10,17,10,17
OX 3080 DATA 39,11,46,50,46,50,45,51,45,5
   1,46,50,46,50,46,50,46,50,46,50,45,52,
   45,52,45,52
VA 3090 DATA 51,11,11,17,11,17,12,16,12,1
   6,12,16,12,16,12,16,11,17,11,17,12,16,
   12,16,12,16
BT 3100 DATA 51,11,45,51,45,51,46,50,46,5
   0,46,50,46,50,46,50,45,51,45,51,46,50,
   46,50,46,50
UK 3110 DATA 5,24,30,38,30,38,36,24,36,24
   ,30,24,44,24,39,28,39,28,44,24,44,38,4
   4,38,39,34,39,34,44,38,44
YD 3120 DATA 24,14,29,33,21,41,21,41,20,4
   2,20,42,21,41,21,41,21,41,21,41,21,41,
   19,43,19,43,21,41,21,41,23,39,26,37
KA 3130 DATA 5,24,22,38,22,38,20,24,20,24
   ,22,24,12,28,12,28,16,24,16,24,12,34,1
   2,38,12,38,16,34,16,34,12
EZ 3140 DATA 0,9,20,72,30,72,32,72,42,72,
   24,9,38,9,20,49,42,49
RT 3145 DATA 11,51,17,51,45,51,51,51,26,3
   3,36,33,26,14,26,14,36,14,36,14
```

Mark Hutchinson's
RANDOM NOTES

This has really been a bad month for me. Yes, Murphy's Law still rules - if it can go wrong it will. First I had the news that I was booked for a residential course at the same time as the November 8-bit show, which I will now have to miss, then my Blackthorn interface died and it is sorely missed, a heavy bout of flu and finally the news that some of my mail had disappeared.

I had a letter asking about some previous correspondence. The first letter I did not get so some problem has occurred with the post. The only outstanding letter (as I write this article in the middle of October) is from Mike Balderstone, who would have had a reply by now if my interface was working and I could write some routines for him (something I do not do unless I can test them), so if you are still waiting for an answer to an SAE you will have to write again, I'm afriad. I did not receive your first letter. If I get a replacement interface then I will test your program and write to you Mike, but one of your problems was answered in the last edition.

I read in the computer press recently that the ATARI 400 computer is well and truly deceased. ATARI has sold the number 400 to IBM for an undisclosed amount. ATARI seemed to hold the copyright for this number and IBM wanted no disputes about their own 400. For some reason known only to ATARI, the 400 was originally called 'Candy' and the 800 was endearingly called 'Coleen'. I wonder if the ST had such a name during the research stage, anyone know?

Does anyone have a solution to the dreadful 130XE keyboard connector? Sometimes my keys just will not work and I know it is the edge connection but I do not fancy the idea of working with this flimsy bit of plastic. I would love to use a proper edge connection and hard wire ribbon cable system but the plastic ribbon and keypad matrix are all one.

It has been really fascinating reading the last few issues of the magazine. Here I sit all alone hammering away at an article having no contact with anyone else, yet when my article is printed, the comments I make are answered by other articles in the same magazine. Do I suffer from prescience? Or do we have an excellent Editor?

The first thing I do when the magazine arrives is to read my column to see just how much the 'Lord and Master' has changed it. I also look at the CONTACT column and have been wondering why so many 8-bit systems are for sale. If you nice kind people would fill in the next reader survey we could maybe establish the cause of this sudden surge in 8-bit sales. Can the Contact Column be so successful? Are these people getting out of computing? Getting away from the 8-bit? Or are they getting away from ATARI altogether? Actually, sometime soon, I shall be having a sale of a lot of hardware and software items that I never use now. They take up much needed space and it seems a shame that they just lie around the house, so you might just see my name in the CONTACT column.

Talking of taking up space, hands up those who have been caught out by the vapourware trap. Thankfully this practice is not as prevalent as it once was, but if you know of a firm who practises this then drop us a line. Sometimes the shop cannot get the goods as promised so it is not their fault, but sometimes they play on this.

One of the things that I will be looking forward to is a report on the November show. There will be many people who will not attend but will wonder what it was like. PAGE 6 has a policy of telling how things really are but many readers do not believe that. Would they believe other readers? Why not give us your impression of the show? After all, this really is a milestone for ATARI 8-bit users in the U.K.

I still log on to the 'Gnome At Home' BBS (and CYMRUTEL, but the liogns are too noisy most of the time - insider joke! - take note PAZ!). I know a lot of people are interested in this so I will be sending the Editor a list of BBS telephone numbers sometime soon. They are for both the ST and 8-bit machines so, if you are interested, you could always send him an SAE and get dialling.

Being a confirmed computer user, I receive dozens of computer magazines in the course of a year, absolutely free. Most of these have a cover price but the advertising revenue usually pays so well that they can become freebies. One of these is 'APPLE BUSINESS - for Macintosh solutions' a very well put together magazine with a cover price of £2.00. When, I wonder, will we see an 'ATARI BUSINESS magazine for the serious ST user' appear?

I have had several letters from Gavin Moran about the ATARI users in N. Ireland. The situation can be summed up in words like - abysmal, bleak, non-existent etc. Not to be deterred, Gavin would like to set up a user group. So I would like to take this opportunity to mention that if anyone is interested in helping him out then please write to him. He would also like to hear from Matthew Tideman of Lea Valley Users. On the same subject, Steven Wilds has set up a user group in Spain and would appreciate some new members. They can be contacted at the following addresses:

Gavin Moran	**Steven Wilds**
398 Canterbury Way	**c/payesas**
Stevenage	**30 Pollensa 0746**
Herts	**Mallorca**
SG1 4DZ	**Spain**

Finally, a hearty thank you to Sandy for the loan of Tari-Talk so that I could port my word processor files over to the ST. A pity it did not work both ways - that would be security! This will also give me the opportunity to port some programs to try out the 8-bit emulator.

I really must go now, all that talk about the 'Friday, 13th' virus has reminded me that I really should back up my hard disk again and not take any chances. I hope that no ATARI users were tempted to spread this malignancy!

Write to Mark Hutchinson, at:
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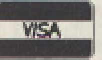
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MODEM: Industrial specification - 300 & 1200 baud; suitable for most computers with RS232 cable, £75.00 (postage extra). Datari interface plus software (for XL/XE), £25.00 extra. Phone Howard on: 0423-879533 after 6pm or weekends.

HARD DISK SYSTEM: Supra 20mb Hard Disk, Spartados, 800XL, 1050 D/Drive, 1029 Printer, 1010 Recorder, Pro 5000 joystick, Mini Office II plus other software and books, £450 o.n.o. Phone Clive on Storrington, West Sussex (0903)-743402.

8-BIT HARDWARE: Atari 1020, £80, new Touch Tablet, £30, 1010, £15, 600XL - faulty with no leads - offers? 1064 Ram Pack, £40. Boxed with manuals, etc. Tel. Pete on 0923-673553 after 6pm.

XL SYSTEM: 800XL, 1050 disk drive and 1010 tape recorder (pause button problem), complete with joystick, lockable disk box with ten brand new blank disks (Inmac), covers and original instruction books. A very good selection of games on disk, tape and cartridge (over 45 varied games) plus 30 Atari Users from as far back as March 1986 - Vol.1 No.11. Everything in brand new condition and all boxed, £160. Phone: 01-949-7104 after 4.30pm.

XL SYSTEM: 400 and 800XL both in working order and good condition. 400 tape recorder and one other recorder, 1050 disk drive including home filing disk, DOS 2.5, blank disks, plus games on disk. Cartridge games include Track & Field, H.E.R.O. and Pole Position. Joystick, around 30 Atari User mags, all leads and plugs. Phone 01-778-0757 after 6.30pm.

ATARI USER: 1 complete set from the first issue to the last (Nov. '88), mint condition. Any offers? Write to: P.O.Box 8556, GR-10010, Athens, GREECE. All letters will be answered.

XL SYSTEM: 800XL with Phonemark cassette recorder, £40 worth of software on cassette plus Cheetah 125+ joystick, £100. Telephone: 0536-62221 after 6pm. Buyer must collect (Northants area).

XE SYSTEM: 130XE computer, 2 x 1050 disk drives - one with I.S. plate - 1010 cassette, Gremlin grabber, Syncalc, Mini Office II, loads of software, accessories and games on disk, cassette and cartridge. All with dust covers and original packaging as new. Set of Atari User and Page 6 magazines (all issues) and joysticks. All for £300. Phone Paul on: 0268-414108 after 6pm.

PRINTER INTERFACE: Graphix AT centronics for 8-bit Atari, £25. Phone Gravesend (0474)-332980.

XL SYSTEM: 800XL, 810 disk drive and 1050 disk drive. Many games and utilities, £140. Phone (0634)-362378.

ST SYSTEM: 520STFM with half-meg disk drive, mouse, joystick. In v.g.c. and fully boxed plus quality games including Lombard RAC Rally, only £240 o.n.o. Phone Karl on: 0625-861946.

PRINTER/PLOTTER: 1020 colour version with spare set of pens. In brand new condition. Ideal starter printer for listings, £30 PLUS p/p. Phone Peter on Macclesfield (0625)-20782.

DATA CASSETTE: 1010, boxed as new. Used only twice, £15 o.n.o. PLUS £2.00 postage if you cannot collect. Phone: 0543-374496 (West Midlands).

XE SYSTEM: 130XE, 1050 disk drive and disks, including Turbo Basic and Transdisk IV, XC12 cassette deck with a few cassettes, also Atari Users, Page 6, New Atari User magazines plus reconditioned colour T.V. Offers around £150. Buyer collects and will not split. Phone Bilston (0902)-43309 after 6pm.

8-BIT BARGAINS: Page 6 issues 10-20. Any offers? Atari disks, cassettes and cartridges. 80 different games for sale, worth £280 new. Sell in as new condition for £130. Telephone Barry Archer on 0268-751333 after 6pm. Buyer collects.

SEGA MASTER SYSTEM: With light gun. Two games for the system and three for the gun. Worth £149.85, sell for £100.00 o.n.o. or swap for an XF551 disk drive + DOS. Is anyone in the TELFORD AREA interested in setting up a user group? Phone Sacha on 0952-595184.

XL SYSTEM: 800XL + Omnimon, 1050 + US Doubler, XC12, all with original handbooks, Hi-res mono monitor (with audio amp), 2 joysticks, 160+ games, utilities, etc., (100 disks in box), cassettes, 100 Page 6/Atari User magazines, official Atari publications (user notes, OS listings etc), Mapping the Atari, Your Atari Computer, spare 800XL, cassette, joystick, games and PSU - all working. Absolute bargain at £250 (may split) or swap for TANDY 120 LAPTOP or w.h.y. (anything electronic). Phone Dave on Tyneside (091)-454-4905 after 6pm for further details.

XL SYSTEM: 800XL, 1050 disk drive, 1010 tape recorder, 1020 printer/plotter with spare paper and pens, with around £100 worth of software. Genuine reason for sale, £200 o.n.o. Telephone: 0373-812062 (Evenings).

XL SYSTEM: 800XL, 810 & 1050 disk drives, 850 interface module, 810 cassette recorder, Touch Tablet and Atari Artist. Lots of software including Text and Spell Wizard. All good condition. No splits please, £325 o.n.o. Phone 0256-473246 (Ansaphone).

XL SYSTEM: 800XL and 1010 recorder, leads, over 60 games, 2 joysticks, Atari User magazines from Issue 1, manuals. Original boxes, excellent for beginner, £90.00 o.n.o. XF551 disk drive, 3 months old, fully boxed with leads, some games including Alternate Reality 1&2 and Draconus, Transdisk IV, £140 o.n.o. Phone Andrew Green on 0602-201198 or write to: 45 Downham Close, Arnold, Nottingham NG5 6PR.

ATARI USER: Magazines for sale, November 1985 to May 1989, £10 including a few Page 6 magazines and p/p. Graham Hadfield, 9 Birch Way, Haywards Heath West Sussex RH17 7SG.

XE SYSTEM: 130XE, XC12, XF551, 850 interface, printer cable, trackball, Proline joystick, Quickshot 2 Turbo joystick, speaker system video cable, £600 worth of disk software and cartridges such as S.A.M. Brand new all boxed with manuals and in perfect condition, plus mags, books and years subscription to Atari Explorer in the U.S.A., will deliver, £380 o.n.o. Tel. 0295-738738

1027 LQ PRINTER: In excellent condition, complete with all manuals, leads, ink rollers, etc., £80.00. Tel. 0482-502556 and ask for Chris.

XL SYSTEM: 800XL with Happy-enhanced 1050 disk drive, also joystick, mags, manuals, disk box, £200. Tel: 061-336-6724.

XE SYSTEM: 130XE, 1050 disk drive, 1029 printer, Touch Tablet, Editor/Assembler, joystick, some software, technical books and magazines, £200. Also Racal/Tandy CP2123 Intelligent Modem V21, V23, Bell plus Datari interface and software, £120 o.n.o. Tel. 0283-762033.

XE SYSTEM: 65XE with XC12 cassette, manual and joystick with about 75 games, £150. Phone: Lee on Loughborough (0509)-217955. (Must be able to collect).

8-BIT BARGAINS: 800XL - no power supply - fit for spares only, £10. 800XL + power supply, working order but needs a replacement joystick port, £30. ROMs:- Basic, £5.00, Mountain King, £4.00, Boulders & Bombs, £4.00, also some cassettes. Please send SAE for list. A. Large, 24 Altfinch Close, Liverpool L14 8YG.

TAPE DECK: 1010 in original packing with all manuals and leads, good working condition but stop & pause keys damaged and require repair, £10.00 o.n.o. Box of software, 100+ programs - no splits (ring for details), £70.00. Phone: 0364-73473 after 6pm (except Friday & Saturday) and ask for James.

XE SYSTEM: 130XE with box, leads and manuals, only used for college reports, great Christmas present, 72 x 5.25" disks and lockable box, printer interface and Atari Writer Plus, Basic XE cartridge and disk, first two volumes of Atari User and other 8-bit publications. Any offers? Will split. Telephone: Holbeach (0406)-26150.

XL SYSTEM: 800XL, £30; XC12, £15; 1029 Printer with paper feeder and software, £70; Commodore 1901 Monitor with Atari 8-bit lead, £140; 65XE, £50. Graham Whittle, 37 Westfield Road, Bilston, West Midlands.

ST SYSTEM: 520ST in mint condition, just over one year old. 1 meg internal disk drive, disk box, many games, dust cover, mouse mat Pro 5000 joystick with joystick/mouse ports extender, only £260 o.n.o. Telephone: 01-542-3480.

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XL SYSTEM: 800XL with 1050 disk drive, Printer (Epson compatible), joystick, lots of software and magazines, £210. Phone: 0772-435254.

8-BIT SYSTEM: 800 (not XL) plus 410 cassette recorder with leads and over 35 games on cassette, £50. Phone: 051-638-6843 after 4pm.

PRINTER BARGAIN: 1029, boxed and includes manual, disk copy of 10-PRINT and disk of utilities for printer (Dump15, Dump1029, Font, List, Print 1029, etc), £75.00 o.n.o. Write to: Mr.G.D.Wood, 4 Matlock Drive, Chadsmoor, Cannock, Staffs, WS11 2EN or Phone: 05435-5096.

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XE SYSTEM: 130XE, 1050 disk drive, XC12 tape deck, 40 disks and 25 cassettes of games, some old classics, Atari User mags Nos. 1-38, Page 6 Nos. 6-40, dust covers and manuals. Will not split, buyer to collect, £250. Tel. 061-633-7785 (Oldham).

ASSEMBLER/EDITOR: Cartridge and manual. Other manuals:- Operating System Listing (400/800), De Re Atari (Training manual for professional programmers), Atari Basic, plus 6502 programming text books (2), £20.00. Phone: 0734-472478, evenings (Reading).

XL SYSTEM: 800XL with full set of brand new ram chips, 1010, XC12, Quickshot II joystick, over £200 worth of software, all manuals, partly boxed and in perfect condition. Will deliver, £80 o.n.o. Tel. 0295 738738.

WANTED

GET IT RIGHT: Original checking program. Can type it in myself if someone will lend it to me. Mr.J.Simpson, 10 Ballot Hill Crescent, Bilsborrow, Nr.Preston, Lancs. PR3 0RX.

DISK DRIVE HEAD: Help!! My 810 disk drive head has finally died and I need a replacement urgently. It is an early 810 and is described in the 810 field service manual as 'The Head Carriage Assembly'. I would also like to swap hints, ideas and programs with users from all over the world. Write to: Ian Duncan, 1 Pearson Street, Clarence Gdns., Adelaide, South Australia, AUSTRALIA.

PAGE 6 BACK ISSUES: Numbers 1 - 19 please. Reasonable price paid. Ring Phil on: 051-355-1834.

TECHNICAL HELP: Does anyone know a source or supplier for the 13-pin 'D' socket (for use on home-built interfaces) and plugs to suit for the serial port on XE/XL machines please? Ring Harry on: 0787-473136

GRAPH-IT: On cassette please. Also ATARI LOGO on ROM. Phone Pete on: 0604 718702.

DISK DRIVE: 1050 or XF551 in good condition. Phone Duncan on: 027979 2531 (Essex) after 7pm.

TAPE DECK: 1010 in GOOD condition. Contact Matthew on Reading (0734) 574167.

XF551 DRIVE: Has anyone bought one of these drives in recent months? I am trying to trace the whereabouts of drive serial number: Q1783000020. Reward for any useful information. Contact Mick, 23 Sybil Road, Wisbech, Cambs. PE13 3NG or phone: 0945-587564.

ATARI ARTIST: Wanted on cartridge and with Touch Tablet. Telephone Barry Archer on 0268-751333 after 6pm.

1050 DISK DRIVE: Must be in very good condition with all leads, manuals and some software. Better still if in Derby or Chesterfield area. Write quoting price required to: Steven Wilds, C/Payesas 30, 0746 Pollensa, Majorca, SPAIN.

PRINTER/PLOTTER: 1020 wanted, preferably with instructions, pens and paper. Write to: John Robinson, Lady Hall, MILLOM, Cumbria LA18 5HR or Phone: 0229-716363.

FOOTBALL/RUGBY SOFTWARE: Any of this software for 65XE on cassette, cartridge or disk (XF551) that you would be willing to sell. Phone: 0874-730034 or write with list to: Daniel Robinson, 17 Penconuin, Llangynidr, Nr.Crickhowell, Powys NP8 1LT.

ARCADE MACHINE (Broderbund): Must be in good condition on cassette and with original instructions. Reasonable price please. Phone: Chester-Le-Street (Co.Durham) 3886154 on Mondays between 5pm and 5.30pm.

PAGE 6 BACK ISSUES: Numbers 1 to 18 inclusive. Very generous offer made. Contact: Phil at 22 Rochester Drive, Ellesmere Port, South Wirral or phone 051-355-1834 after 7.30pm.

DISK DRIVE: £20.00 + postage offered for DEAD 810 drive (must be complete with PSU). If you have such a beastie please write to: David Hoare, Flat 5, 50 St.James Road, Leicester LE2 1HQ. (Please include your daytime telephone number if possible).

More CONTACT on page 50

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See PAGE 6 Magazine Issue 37 page 29 for further details of this super program. Tape version has all the facilities and fun of the disk version except that the number of horse databases is limited. *AVAILABLE EXCLUSIVELY FROM PAGE 6*

CONTACT extra

PENPALS

8-BIT USERS: I would like to hear from 8-bit cassette users from around the world to swap hints, tips, etc. I own a 130XE + XC12 data recorder. Please grab your pens and write to: Tony Gibson, 52, Edinburgh Avenue, Leigh-on-Sea, Essex.

XL USER: My name is Ray and I have an 800XL, 1050 disk drive and 1010 tape unit. I am interested in all types of software, arcade, adventure, etc. All letters will be answered. Write to: R.Robertson, 19 Littlebury Green, Basildon, Essex SS13 1PA.

XL USER: Is there anyone out there who would like to swap hints, tips, etc? I have just bought an 800XL and am hoping to get a disk drive. If interested please write to: James Anderson (aged 14yrs), 7, Hinching Brook Close, Wooton Ride, Kings Lynn, Norfolk PE30 3TY. (Preferably aged between 12-16yrs!).

FINNISH 8-BIT GROUP: We are a small 8-bit group in Finland looking for contact with other groups and individuals. All information and advice very much appreciated. In turn we will send PD and/or souvenirs. We would also like to join as many International clubs as possible. Used books, periodicals and equipment as well as educational, utilities and demo programs most welcome. Write to: Esa Ruoho, Kotikonnuntie 6 B31, 00940 HKI, FINLAND.

ATARI USERS: My name is Garry and I want to get in touch with ANY Atari users with programming ability as I need your help. Write to: Garry Smith, 76 Belfield, Digmoor, Skelmersdale, Lancs WN8 9HJ.

8-BIT PENPALS: Wanted anywhere in the world. I have an 800XL, 1010 tape unit, 1050 drive, 1020 printer and monitor. I am interested in all types of software. Write to: Barry Archer, 605 High Road, Benfleet, Essex SS9 5RZ.

ST CONTACTS: Wanted to exchange help and information on the use of my new ST. All letters answered. I am also looking for the ORIGINALS of any of the SSI D&D R.P.G. Anyone got any for sale? Please write to: Jason Bradwell, 157 Crosby Road, Grimsby, South Humberside DN33 1LY. Tel: 0472-74584.

8-BIT USERS: I would like to hear from 8-bit enthusiasts from all over the world to swap hints, games, programs and ideas. I am 14 years old and have an 800XL with 1050 disk drive. Please write to: 2 Ulus Mah, Muderris Salih Rustui, Bey Sok, Huzur Apt.D16 Etikerl, ISTANBUL, TURKEY.

ANGLO/SPANISH 8-BIT USER GROUP: Anyone interested in joining? Would like to contact tape-based users anywhere. Has anyone got an adventure compiler on tape? All letters answered. Write to: Steven Wilds, C/Payesas 30, 0746 Pollensa, Majorca, SPAIN.

XL PENPALS: I have an 800XL with a XC12 cassette and over 160 games. Would you like to exchange some of yours for mine? Please write with list. All letters answered. Contact: Dean Chadwick, 138 Townsfield Road, Westhoughton, Nr.Bolton BL5 2NT.

XE/XL PENPALS: My name is Ihab. I have an XE cassette-based system. I would like to hear from any XL/XE users anywhere in the world. I have lots of software and utilities and wish to swap ideas. Please hurry! Write to: Ihab Aboudaya, 74 Esher Park, Lucan, Co.Dublin, IRELAND.

ST USERS: I am looking for penpals in the U.S.A. and/or Canada to exchange game tips/hints. Are there any ST users in those countries who are interested? If so, just drop me a letter. Write to: Kees Maas, Van Pedestraat 14, 5622 BG Eindhoven, THE NETHERLANDS.

CONTACT is FREE of charge and may be used by any genuine Atari enthusiast for contacting other owners. Any notice may be included except those offering software only for sale or exchange or those offering items for sale commercially. The Editor reserves the right to omit any notice received at his discretion.

Send your CONTACT notice to CONTACT, PAGE 6, P.O. Box 54, Stafford, ST16 1DR. Please write your notice on a separate sheet of paper, not as part of a letter.

PROGRAMS WANTED

Your programs are wanted as *BONUS* programs for our issue disks. What we need are machine code games or utilities that would be too long to print as type-in listings. Programs that have lots of support files to read in or things that fill an entire disk. How about games that were released commercially but are now long gone. If you are the author and have the rights you can earn yourself a few bob more. *We will pay you up to £100 for BONUS programs* depending on their complexity and nature. There must be dozens of programs out there waiting to see the light of day, so send them to us.

Make sure your disks are clearly marked BONUS and that the programs are adequately documented. Send them to PAGE 6, P.O. BOX 54, STAFFORD, ST16

UPDATE

CATCH DAY (ISSUE 39): A few more amendments and comments on this program have been received from Robert De Letter in Belgium. Robert comments as follows:

> In line 14 a zero is poked into location 729 (no auto delay rate). This will not work on the old Atari 400/800 computers. Line 976 must be renumbered to 1000 and then the original line 976 should be deleted.
>
> In line 9220 the program reads 223 DATA statements (FOR I=0 TO 222) and there are only 222 items in lines 9310 to 9317 so the first item of line 9320 is added to the FOR/NEXT loop in line 9220! Line 9220 must be changed to FOR I=0 TO 221.

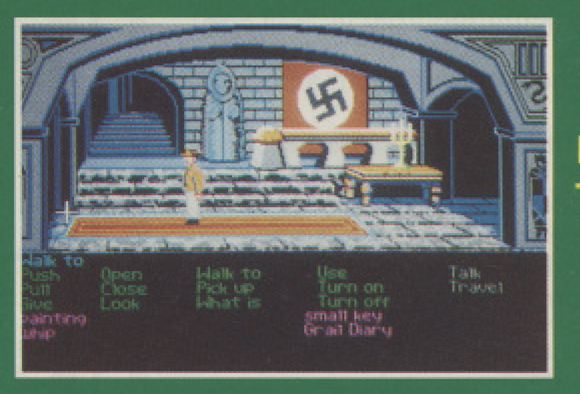
PRO GOLF (BONUS ON ISSUE 39 DISK): A letter from M. J. Bennett in Surrey solves a little problem with this game which we knew about but were not sure whether it was a 'feature' or a bug! If you slice a ball, it sometimes flies off backwards at high strength but this can be amended so that it is sliced at an angle of about 12 degrees and at only a proportion of the strength selected. Just add a couple of brackets to line 360 amending the line as follows

```
360 IF IMP<14 OR IMP>16 THEN ? "SLICED":
STR=INT(STR-STR/(RND(Q0)*Q3+Q1)): DG=DG-12:
IF IMP>16 THEN DG=DG+24
```

Mr Bennett goes on to say that the GOLF program is the best game he has ever played. We don't disagree with that!

ST FILE

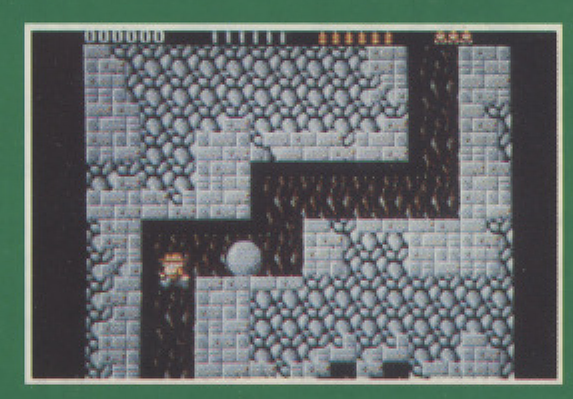
This issue, the serious stuff. Arnor have a new database program to compliment Protext, still the finest ST word processor. PRODATA includes all the standard features of a database and has the added facility of being totally compatible between the ST and PC versions. Arnor claim that you can simply take the disk out of your ST and insert it in the PC! Price is £79.95 but you might just catch it at the introductory price of £55. Software Express meanwhile have an excellent point-of-sale package called CRICIT which will enable any small business to have full stock control, invoicing and customer records with a standard ST. The software can read and create barcodes and, as shown at the PC Show, it was very impressive and looks like being something any shopkeeper should consider. Price is £249 plus VAT and you can get further details from Mike Jones or Peter Fellows on 021 643 9100. FONT DESIGNER is a new top quality program that allows users to design new Postscript fonts as well as logos and symbols. The program will also convert to GDOS fonts. Maybe a little specialised but a top quality serious program. If you are interested contact Barry Parkinson of PCG Computer Software on 0229 36957. Fast Technology have a little product called TURBO 16 which incorporates a 16Mhz CMOS 68000 CPU together with 32k of cache memory to provide significant speed improvements on all ST and MEGA machines. Over 60% speed improvement is claimed on all types of software but it will set you back a hefty £299. Details from FAST Technology on 0734 784933. On the Education side a new package is due called PLAY AND READ which comes complete with a set of five reading books and a story cassette. The program has been available on the BBC for some time and has been extensively used in schools where the success rate in teaching slow to learn pupils is said to be very high. Prisma Software have many testimonials from teachers regarding the success of the program and, in bringing it to the ST, hope to encourage parents to help their children at home. Further details can be obtained from Jason Salisbury at Prisma Software, P.O. Box 211, Chester, CH1 3NJ. Telephone 0244 26244. Frontier Software have, meanwhile, dropped the price of its Xtra-RAM memory upgrade kit to £299.95, a saving of £100. This new board will expand any ST to 2.5 Mb and the MEGA 2 up to 4Mb. Just the job for those who might want to run the Ultrascript option on the new Fleet Street Publisher - we might have to send in an order soon! Frontier can be contacted on 0423 567140.



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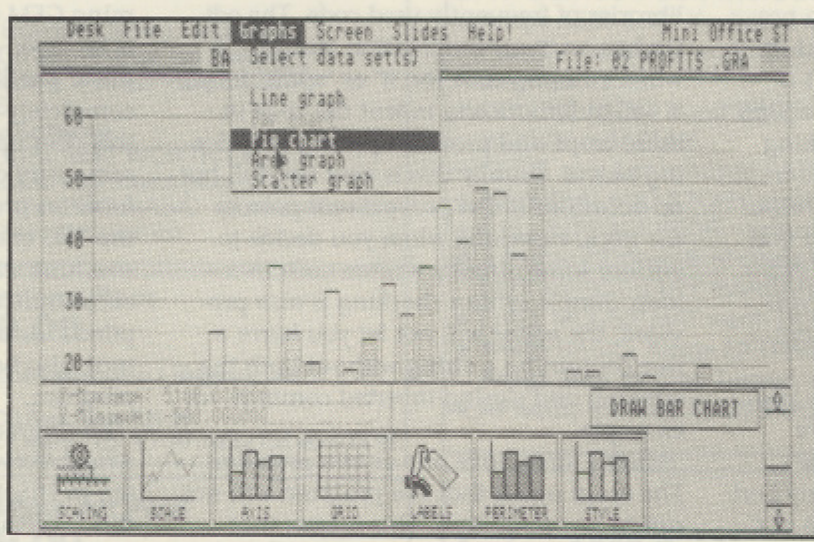
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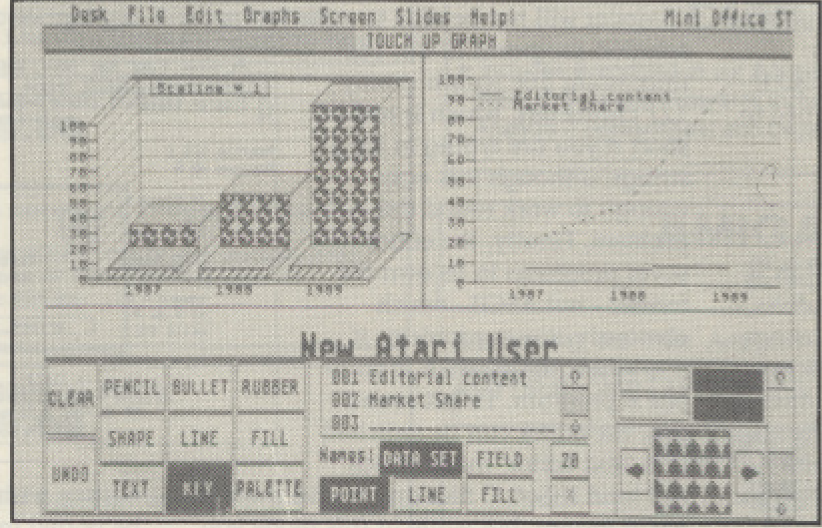
REVIEWS INSIDE

Mini Office Professional

Presentation Graphics

In Issue 39 I gave a cautious thumbs-up to the first two modules of the Mini Office Professional range. This month, I have been looking at the latest release - Presentation Graphics. Presentation Graphics (hereafter PG) comes in the same style of small box, containing a ring-bound manual and two disks. One of the disks, in addition to the utilities common to all the series, contains the monochrome resource file. The other disk contains both the program files and sample data files which are useful for familiarisation. The manual is of similar good quality to the others.





Mini Office PG is aimed at the person who wishes to present numerical data using graphs. PG allows you to load in spreadsheet data files, or create your own, and then display them using one of five types of graph. You can choose from: Bar or Pie charts or Area, Line or Scatter graphs. Each of these has many options. If, for instance, you wished to create bar charts to display three figures for comparison, you could have the bars side by side, stacked on top of each other, or drawn '3 dimensionally'. You can configure the colour and fill pattern with which they are drawn, axis labelling, scaling and the display of a grid. Patterns can be chosen from 100 predefined ones, which include such designs as cats, cake slices and hearts. If you do not find one to your liking, you can define your own.

DIFFERENT TYPES

Database have done a lot of thinking about the possible types of graphs, and have covered many common requirements.

Title:	**Mini Office Presentation Graphics**
Publisher:	**Database Software**
Price:	**£24.95**
Reviewer:	**Matthew Jones**

Since you have on hand the ability to create many different plots, they have thoughtfully included a table to help you decide which are best for particular purposes. A check-list of all the items you should have included is also helpful.

A basic graph will probably not convey the complete message, so after you have created your graph you move over to the Art Screen. This (under-documented) facility allows you to add text, basic graphics, and a pattern key to your graph. The key facility is especially useful when labelling Pie charts, which do not have automatic labelling. If these basic art facilities do not satisfy you, then you can do further creative work in other graphics programs since PG saves using the standard PI2 or PI3 format (according to the graphics mode - it works in both colour and mono). As added flexibility, PG will plot the graph restricted to a portion of the screen, so that you can plot up to four graphs to the same screen. By leaving an area blank, you can use it for writing your message.

Once you have your finished graphs, you will want to show them to an audience. To help you with this, PG will either print your screen in one of three sizes (5.5" x 5.5", 7" high x 18" wide, or 7" high x 9" wide on my Epson), or it allows you to build up a slide show. The slide facility is aimed at both live presentation and standing demo. The latter is supported by a timer, to specify the delay. The former uses the mouse buttons to allow you to step forward or backward through the 'slides'. Personally, I would like to see an additional cut down version of this program which just did slide presentation. As it is, you must ensure that you do not go past your last slide since it will leave your audience looking at the distracting control windows.

CONCLUSION

Mini Office Professional Presentation Graphics is not what I would consider a full presentation graphics program, since it does not give good support for straight text slides. You can produce text but there is no auto-alignment available. Since PG uses a standard file format which other programs could create, it is not, however, a serious drawback. There are a lot of different modes in the program, allowing you to enter data, select groups for graphing, and more, but they are well designed and easy to move between. Neither PG nor any of the other Mini Office programs have ever crashed on me, which for a first release shows good programming and careful design. As a result, Presentation Graphics is a program that is well worth buying if you have any numbers that would be easier to understand as a graph - whichever style you fancy.

Review by Matthew Jones

HiSoft C

Finding C too cumbersome or difficult to learn? Steve Pedler has discovered a version that makes it easy

C is a compiled language. To produce a program, you type it in using a text editor, the text is then converted into machine language by the compiler and, to produce a working program, this must then be linked to a pre-written library of functions by a separate program, the linker. Only when you have done all this can you actually run the program, and if it doesn't work you have to go through the same edit- compile-link cycle all over again.

This process will have put off many people who would otherwise like to have learnt C. For this reason HiSoft's new C interpreter (from the French company Loriciels) is to be welcomed. This version of C functions just like a BASIC interpreter, you type in your program and when complete just select 'Run' from the drop-down menu. No compilation, no linking and if an error occurs you are simply returned to the editor.

THE PACKAGE

HiSoft C comes on two single-sided disks, one containing the interpreter and associated files, and the other help files, source code and examples. The editor and interpreter are fully integrated and the libraries are memory resident so do not have to loaded when your program is run. There is a thick (339 page) spiral bound manual which has a useful section for newcomers to C. The manual is generally very good; it has been translated from the French and contains a certain amount of Gallic humour which thankfully is not too intrusive (see page 14 of the manual for a good example). It does contain a number of spelling errors and the occasional mistake but this should not cause problems.

The editor is fully GEM-based and quite good. It is not as good as Tempus (few editors are) but is better than many provided by compiler publishers. Among its features is the ability to contain up to eight programs ('modules') in memory simultaneously. These can be treated as entirely separate programs or as one large program, thus allowing you to build up libraries of frequently used code. The editor has an auto- indentation feature - when entering code for 'if' or 'while' loops, it will automatically indent the code in these loops and provide opening and closing braces. Usually this is very helpful, but on occasions it can prove a real pain in the neck, especially when you decide to enclose some already written code in a loop. Simple syntax checking is also provided, the editor will not let you leave a line containing a string without both the opening and closing inverted commas, for example.

HiSoft C does have one or two problems. The main one is that the program will not run in low resolution. This means that those users who do not have access to a compiler will not be able to write low resolution programs at all. The maximum line length is only 127 characters, which is rather short if you are typing in long strings, although it is easy enough to work round this problem. Finally, the editor saves programs in its own file format - not ASCII - which obviously causes problems if you subsequently wish to compile a program. To get round this, the editor can be switched into 'text editor' mode which will load HiSoft C files and resave them in ASCII format, but while in this mode you cannot run the program! I cannot help feeling this is unnecessarily complex.

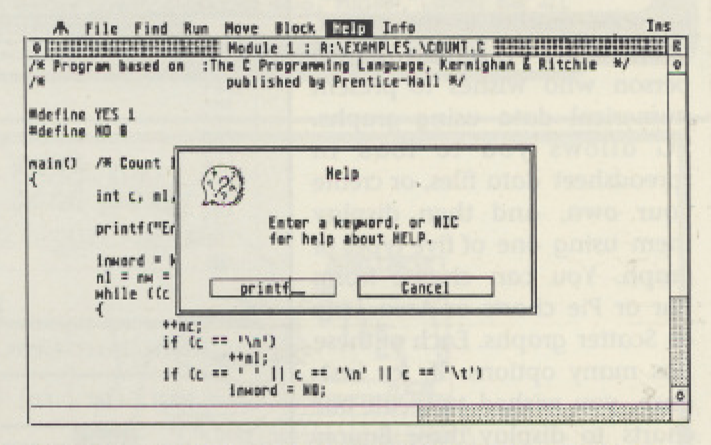
Title:	**HiSoft C**
Publisher:	**HiSoft**
Price:	**£49.95**
Reviewer:	**Steve Pedler**

THE INTERPRETER

This is a pleasure to use, although just clicking on 'Run' and seeing it happen is very odd at first if you are used to a compiler. The version of C implemented here is almost a full K&R C, with one or two minor differences. The main one I found is that global character arrays cannot be initialised outside a function, while local arrays can be initialised inside a function - both directly contrary to K&R. I suspect this is due to the very different demands of an interpreter as opposed to a compiler.

The libraries provided are extensive and include all the usual C functions plus GEM and TOS routines (the latter built directly into the interpreter rather than as macros obtained with the osbind.h header file as is usual with a compiler). There is also a GEM 'toolbox' designed to make programming GEM easier; the source code for this is included and may be modified or compiled. The libraries are said to be almost completely compatible with Lattice C and this does appear to be the case. There are some very good and easy to use debug facilities provided and the interpreter traps the TOS exceptions so that crashing the machine with bombs on screen should occur much less readily. If desired, compiled C and assembly language modules may also be incorporated into your program.

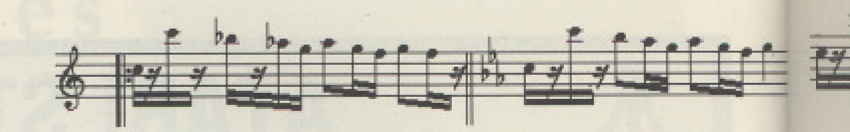
The manual says that it should be straightforward to compile programs written in HiSoft C. From personal experience this is certainly true, I had no difficulty making the small changes necessary to get my Lattice compiler to accept programs written with the interpreter. Programs can be ported in reverse direction as well, but HiSoft warn that this may be more complex.



CONCLUSIONS

The principle advantage of this system is the short development time and interactive debugging it makes possible. I think this should considerably increase productivity and make program writing more enjoyable. It does have some disadvantages. Programs written in HiSoft C will invariably run slower than their compiled equivalents (a problem inherent in almost any interpreter) and it will not produce .PRG files executable from the desktop - the interpreter must always be in memory if you want to run a HiSoft C program. Nevertheless, beginners to C will find it less of a culture shock than using a compiler for the first time, while more advanced programmers will appreciate the speeded-up development time and debug facilities. I can heartily recommend this program.

MAKING MUSIC WITH YOUR ATARI



John S Davison's regular guide to all the ways of making music on your favourite computer

Want to make music with your computer? If so, this new regular feature should be of interest to you. It takes over from the 'MIDIot's Guide to Music Making' concluded in the last issue, and is designed to cover any aspect of making music with a computer. Although MIDI now plays a leading role in musical applications on a computer, I don't intend to concentrate exclusively on that topic. In fact, if it's music related I'll be happy to include it here - whether ST or 8-bit based!

In future issues I'd like to cover the topics YOU are interested in. Please feel free to write to me care of Page 6 Publishing (see Contents page for address) with suggestions for things you'd like to hear about, or with any music related questions or problems. I can't guarantee to know the answer to everything, but I'll do my best to help where possible. If you'd like a personal reply PLEASE enclose a stamped, self addressed envelope with your letter.

BARGAINS GALORE!

There couldn't be a better time to get started in the wonderful world of MIDI music making. As I write this Yamaha are busy introducing new home keyboard and synthesiser products into the shops and are offloading remaining stocks of last year's models at crazy prices. For instance, I've recently seen the PSS-480 and PSS-680 keyboards on sale for £99 and £129, over a third off their normal prices! They've been replaced by the PSS-580 and PSS-780 models, which are virtually identical to their predecessors apart from cosmetic detail and a few changes to the automatic rhythms. I've already sung their praises in the MIDIot's Guide so I won't repeat it all here. At these low prices they're irresistable!

Further up the range there are similar whopping reductions on models from Yamaha's PSR and DSR series, with savings of up to around £200 depending on the model. Again, they've been superceded, but this time by completely new models. The newcomers use a new form of synthesis technology called DASS (Dual Architectural Synthesis System), which uses a mixture of digitally sampled sound together with an advanced version of Yamaha's FM (Frequency Modulation) synthesis method. Whatever it's called it produces some very nice sounds, to my ears anyway!.

If you want to move out of the self contained 'home keyboard' area and get something a little more professional, then models from the YS and DX synthesiser series could interest you. These have none of the 'fun features' of the home keyboard, i.e. no automatic rhythms and accompaniments, nor do they have built-in amplification facilities. Their FM technology may be old hat by today's standards, but they're still capable of producing stunningly beautiful sounds. As an example, the YS-100 has just been cut from £599 to £349, and its bigger brother the YS-200 is down from £699 to £449.

There are a few Casio keyboard bargains around, too. Most notable is probably the discontinued CZ-230S home keyboard, now selling for just £119 in a number of specialist music stores. I don't believe it's as good as Yamaha's PSS models mentioned above, but some people prefer the Casio sound to Yamaha's. It's worth a listen if you can find one.

Not all music stores are carrying these offers, so you might have to search around to locate them. Your best bet is to read the adverts in specialist music magazines such as Music Technology or Sound On Sound. All the big companies advertise their special offers here, so they're a good place to start.

OK, I'll come clean. I just couldn't resist Yamaha's offerings, so I've added a YS-200 to my trusty PSS-680 on which I've served my MIDI apprenticeship for the last year or so. It's now connected to the ST along with the PSS-680, and first impressions are that I've entered a whole new ballgame! I'll tell you more about it next time.

THOSE SHOWS!

It's currently fashionable to moan about computer shows, but one of the great things about attending them is discovering unexpected bargains. The downside to this is that it usually results in a severe pain in the wallet! I've long been a fan of Steinberg's legendary musical application software for the ST, but the high prices have always kept me at bay. Until the last Atari User Show, that is! One of the stands was selling the Steinberg Pro-12 sequencer for £49.99 instead of its normal price of around £130. OK, so it's a cut down version of the Pro-24, but real Steinberg quality for less than £50?



Unbelievable, but true!

I've been using Pro-12 for a couple of months now, and I must say it's living up to expectations, give or take the odd bug. After happily using Activision's Music Studio (which I still like as an inexpensive step-time sequencer) the change to real-time sequencing with Pro-12 was something of a culture shock. However, it also has step-time facilities so you can continue using this method of note input if your musical keyboard skills aren't up to playing in real-time!

While we're on the subject of shows you may be interested to hear that plans are afoot to mount a specialised show aimed at the MIDI enthusiast! Westminster Exhibitions Ltd. have just announced that the MIDI Music Show will take place in London at the Novotel Hotel, Hammersmith on 7-8 April 1990. It's aimed at both amateur and professional musicians involved in electronically produced and stored music. It sounds as if this will be a major event for everyone interested in MIDI, so note it in your diary now.

LEARNING HOW

If you're REALLY serious about learning how to use computers for composing, performing, and recording music then you may be interested in a company called 'Dutycell Ltd.' It's run by Danny Brunton, a professional computer programmer and MIDI specialist, who's recently been working with UB40 in preparation for their next album. Dutycell are currently advertising a couple of MIDI courses designed to provide you with basic theory and practical experience of MIDI instruments and computers.

The Basic MIDI Course costs £160 for two days tuition, and is aimed at musicians and trainee recording engineers who need to acquire basic experience of using computer driven MIDI instruments. It consists of three major topics: MIDI, computers, and sequencing. Basic theory and terminology of the respective topics are dealt with, followed by practical aspects of recording, editing, and playing music using a master keyboard, synthesiser, and drum machine - plus an Atari ST running appropriate software, of course!

The Advanced MIDI Course costs £240 for three days tuition, and is designed for those already familiar with MIDI equipment who wish to know more about the technical details of MIDI, sequencing, sampling, and the use of computers for advanced MIDI applications. It covers details of most of the MIDI message types, including such things as MIDI Time Code and Song Position Pointers. The sequencer section covers topics such as use of MIDI Files, System Exclusive Data Dumps, drum machine programming, and SMPTE synchronisation. The sampling section covers the operation of a sound sampler, including the loading of samples; making samples from scratch; filters, envelopes, and loops; and management of voices, banks, and keyboard setups.

I've not been on either of these courses, but they sound quite good, if a little pricey for the amateur. If you want more details contact Danny Brunton at Dutycell Ltd., 21 Argyll Mansions, London W14 8QQ (phone 01-603-9014).

If funds don't run to professionally run courses, then you could always educate yourself by reading a few of the many books now on sale. These are available on all aspects of computer based music making, from basic information on MIDI through to writing your own MIDI A. Penfold, a prolific author on electronics and computer topics for many years. He's recently started writing about computer based music, and already has several volumes to his credit.

The first is called 'Computers and Music', published by PC Publishing (ISBN 1-870775-07-4) and costs £7.95. It's aimed at the complete beginner to computing and MIDI. Its 174 pages lead you gently into the world of computer based music, covering computer basics, storage media, ports and peripherals, 'real computers' (including details of the Atari ST, amongst others), MIDI, music software, and MIDI instruments. It also has a 19 page glossary which clearly explains all the jargon you're likely to come across, plus a detailed index to help you find your way around. It's good value, especially for the musician contemplating making his first foray into the world of computers and MIDI.

The second book is 'Musical Applications of the Atari ST's', published by Bernard Babani (ISBN 0-85934-191-7) at £5.95. This one's written specifically for the ST, and assumes you already have a basic grasp of how the ST works. The first chapter does give a detailed description of the ST's internal sound chip and how to program it, but after that the accent is heavily on MIDI. Its 90 pages cover MIDI connections, MIDI modes and messages, MIDI application programs, ST MIDI Add-Ons, and MIDI processing. Also included are plans for simple MIDI accessories you can build yourself, and sample BASIC program code for MIDI data manipulation (such as channel shifting and harmonising). This is the book to buy if you understand computers, but want to know more about MIDI.

STOP PRESS!

I've just received a diskful of ST MIDI software designed for use with the Yamaha PSS keyboards! This was written by David Gymer of Louth, Lincs., and was sent in response to my plea in the last issue for software of this type. David has written a Patch Editor, a System Exclusive Librarian, a Drum Machine program, a Guitar Tablature Sheet Printer, and a MIDI demo for Ozzy Osbourne fans! The Patch Editor allows you to get at far more sound generation parameters than the nine available from the PSS's front panel, opening up a whole new world of sound for the PSS owner!

Not content with this, David has placed all the software in the public domain, so it will appear shortly as a Page 6 PD disk. Unfortunately, there just wasn't enough time to try it all out before the copy deadline. Full details will be in the next issue.

That's it for this time. Don't forget to write in with those suggestions and queries. And if you go looking for some of those bargains - happy hunting!

THE PAGE 6 PSS DISK

The PAGE 6 PSS DISK containing the Patch Editor, System Exclusive Librarian and other utilities mentioned together with a number of Music Studio songs specially arranged for the Yamaha PSS series is available from PAGE 6 PUBLISHING, P.O. Box 54, Stafford, ST16 1DR price £2.95.

INDIANA JONES & THE LAST CRUSADE

The Graphic Adventure

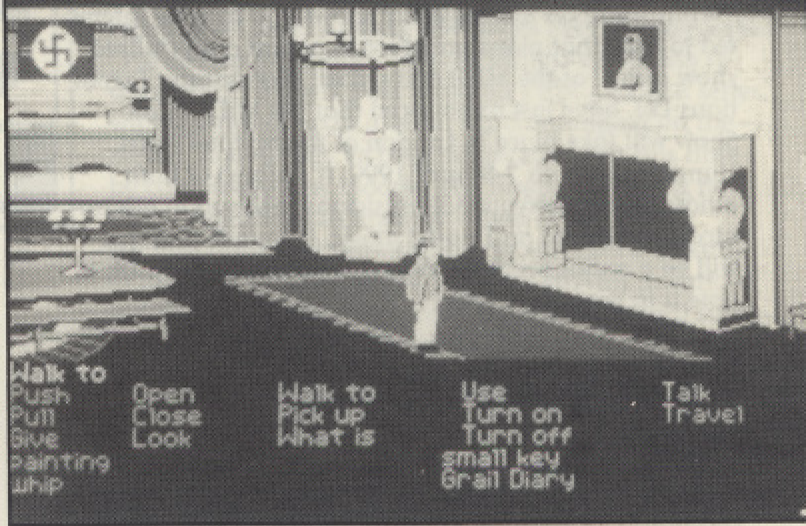
You've read the book, seen the film, no doubt played the arcade game .... and even if you haven't, here comes the Adventure Game! It is very slightly advantageous to have seen the film but certainly not necessary as, although the plot is relatively similar, many new additions have been incorporated by way of logical, and sometimes devious, puzzles and there's certainly enough here to keep the adventure fans busy for many nights.

The packaging consists of SIX single-sided disks, a copy of The Grail Diary (which is not exactly CLEARLY written!), booklet of translator tables and a special red acetate strip viewer, the latter being necessary to read certain random codes from Indy's notebook when prompted. You have just 3 chances to get it right or the game will proceed in so-called 'demo mode' (Save & Load features disabled) and vital information and clues will be missed as the game progresses. This is a common copyright protection procedure and it certainly works!

Your quest, as Indiana Jones, is to seek and rescue your lost Father, Henry, and locate the genuine Holy Grail before the Nazis seize it for the Fuehrer treasure collection. Some characters will help you on your travels across Europe and some will positively impede you - one lady in particular is a wolf in sheep's clothing!

The adventure is entirely mouse-controlled - with the exception of the fight scenes, where defined keys are used - and the player selects the input/action from a table of key words and actions below the graphic display window and combines them with other words or items to construct the required input. Where the opportunity to talk to other nearby characters arises, so the 'TALK' icon will be highlighted, and the 'TRAVEL' icon likewise becomes available when and where appropriate. The use of other defined keys in place of the mouse is optional but I think you'll find this option more confusing! Current inventory is displayed in contrasting colours at the bottom of the screen.

Title:	**INDIANA JONES & THE LAST CRUSADE**
Publisher:	**U.S.Gold/Lucasfilms**
Price:	**£19.99**
Reviewer:	**John R.Barnsley**



A useful tip whilst finding your way around each location and looking for suitable objects is to select the 'WHAT IS' icon and move the cursor cross around each scene - notable objects will thus become highlighted on the command line, sometimes allowing you to manipulate them. There is a fair amount of scenery, though, so be prepared for a long session!

Before seriously attempting to solve this adventure, TWO important aspects must be understood. Firstly, your Father's Grail Diary, which you will find buried beneath the regular post in your office, is an essential aid in understanding the majority of the puzzles encountered. You will be allowed to look at this diary at selected locations and be subsequently presented with a full-screen view of two of it's pages which will yield vital graphic, numeric and poetic clues, although somewhat cryptic. Secondly, a good work-out in the College Gymnasium is good training for future fights! (Read your game instructions to take full advantage of this training).

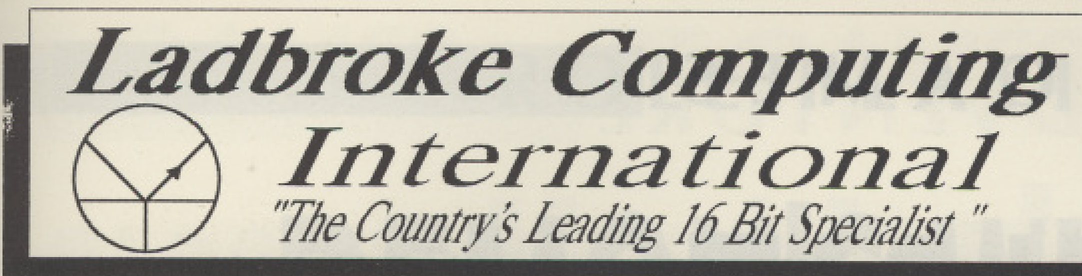
There are many 'set pieces' - as I like to call them - where the program goes off on it's own for a while, but once you have seen them, pressing the ESCape key will cut them out and speed things up somewhat .... which leads us neatly into the major criticism of this software, SLOWNESS OF PLAY! Not only is the adventure spread over six disks but different sections of some scenes/events are further spread over several disks. This wouldn't be that bad if we had something to watch on the screen while all this disk-swapping/loading was going on, but NO .... complete blackness! Just as the drive finishes loading in the next part you are prompted to insert yet another disk. Whilst checking this game out for the first time, I had all six disks spread over the back of the computer with two 'SAVE' disks as company and, to be quite honest, I lost track on more than one occasion of what I was doing in the adventure!

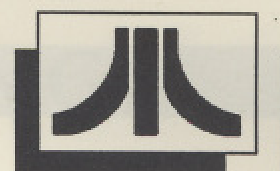
SAVE and LOAD routines are relatively easy to carry out yet I cannot understand why, when loading in a restored game, EACH DISK - from which different parts of your saved game came has to be loaded in separately. On one occasion, whilst restoring a game, I had to change disks six times: 3, 4, 5, 2, 5 and finally 4!

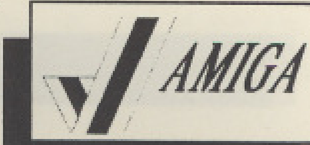
However, having expressed my personal disappointment of it's implementation, there is very little else to fault this game. The puzzles are many and varied, requiring the combination of more than one object on some occasions. The animation is neat and effective though not as refined as, say, the latest Sierra games (though it's more puzzle-orientated). Pleasant music is included and this ties in nicely with appropriate scenes. There is also a liberal sprinkling of humour to savour as you progress.

STARTER'S TIPS

- *Work out in the College Gymnasium to attain peak fitness.*
- *To deal with the students blocking the door to your Office, select the sentences which inform them that you will see them in strict order.*
- *Pick up the Junk Mail, Letters and Papers from your desk to find a useful package.*
- *The Jar can be opened but not moved, so bring a 'sticky' problem here to be 'solved'.*
- *Use the Office window for future access.*
- *After meeting Walter Donovan, TRAVEL to Henry's house.*
- *Pull the toppled bookcase and look on the back for the key to another problem.*
- *Use the small picture in Henry's bedroom as a future 'substitute'.*
- *Try to take the tablecloth to get the small plant pot moved.*
- *The chest will only open if you have 'solved' that sticky problem earlier!*
- *Now you can TRAVEL to Venice.*







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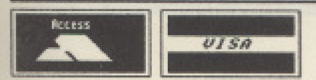
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POSTMAN PAT

postman pat, postman pat and his black and white cat .... la, la, la-la,laa,la

Love him or loathe him, you can't deny that Postman Pat has been a big commercial success. Following the TV shows, videos, books, and all manner of merchandise we now have the computer game! While it's aimed at the younger games player, there's a harder version included to challenge older players too. And, as a bonus, the author has added three extra games in the form of Snap, Ludo, and Snakes and Ladders - all with a Postman Pat flavour.

Your job is to use the joystick to control Pat's van as he makes his morning rounds delivering parcels and letters to his friends in the village of Greendale. He must be on some sort of productivity scheme as he's been given a time limit to complete all the tasks. If he fails it's Game Over. If he succeeds the process starts again, but with a shorter time limit and more letters to deliver. Points are awarded for correct deliveries, and for successfully completing various odd jobs he gets asked to do while on his rounds. These include tasks such as recapturing Peter Fogg's sheep which are currently rampaging around his garden, and picking up a prescription from Dr. Gilbertson and delivering it to Miss Hubbard.

You get a bird's-eye-view of the proceedings, each screen showing a section of road plus features of the local landscape, such as buildings, bridges, trees, etc. Scrolling messages are displayed at the top of the screen telling Pat what to do next. You have to steer the van along the road, the screen quickly flipping to show the next section when you reach its boundary. If you stop at the house of one of the main characters, Pat jumps out of his van and you have to control him with the joystick to perform the allotted task.



First stop is always the Post Office, where Pat collects the mail from Mrs. Goggins. Each delivery consists of either a number of letters or a parcel. The letters may be delivered singly to any house with a flashing door(!) by stopping the van level with it and pressing the fire button, although with practice you can do it without actually stopping, which saves time! The letter flies out of the van into the letter box if your aim was good, but if you miss you have to make Pat get out and pick up the letter before you can try again.

To make life more difficult there are oil slicks on the road which play havoc with the already rather difficult van steering controls. Also, you have to contend with Miss Hubbard, who's forever wobbling along the village streets on her old push-bike. Driving over her doesn't seem to cause any physical damage either to her, her bike, or to Pat's van, but it does cost you valuable game points!



To get anywhere with this game you have to know the layout of Greendale, so it's wise to spend some time exploring the roads and finding out where the main characters live. You really need to draw a map too, to help you until you've memorised everything.

The Ludo, Snakes and Ladders, and Snap games have nothing to do with the main game - they're just there as freebie extras. The first two are straight implementations of the old favourite board games, playable by up to four people. Snap is a one player game using pictures of the principle characters from the main game. Each character is split in half at waist level, and their top and bottom halves are scrolled across the screen at different rates. When the two halves of the same character coincide, you indicate Snap by pressing the fire button.

Watch out Miss Hubbard!

- ***SOUND** - the Postman Pat theme music quickly becomes tiresome, but can be turned off and replaced by very simple sound effects*
- ***GRAPHICS** - the bold, colourful, cartoonlike backdrops and animated sprites are well executed and should prove attractive to children*
- ***GAMEPLAY** - very young children (and most adults!) will have problems with the controls, but older kids should eventually get the hang of it*
- ***VERDICT** - a good budget level children's game, but younger players will need help to get the most out of it*

Title:	**POSTMAN PAT**
Publisher:	**Alternative Software**
Price:	**£9.99**
Reviewer:	**John S Davison**

DEMON'S WINTER

Are you experienced enough?

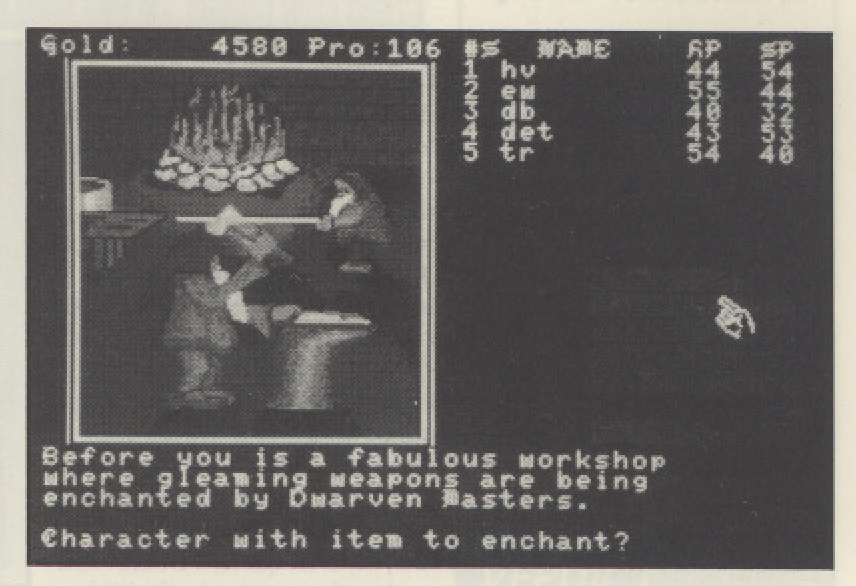
Another successful D&D type game from SSI. If you enjoyed Galdregon's Domain or Times of Lore and would like something with a little more meat to it, or if you are fan of the Ultima series and still waiting for Ultima V to finally appear on the ST, then this could be just the game for you. It is an excellent Fantasy Role Playing adventure set in Ymros, the same mythical world as SSI's earlier Shard of Spring.

You start the game by creating a party of five adventurers to investigate the burning of a small village by a horde of Kobolds. You can choose any mix of Humans, Elves, Dwarves, Dark Elves or Trolls; you get to 'roll dice' for their Speed, Strength, Intellect, Endurance and Skill, then you must choose to which of the ten classes (from Barbarians to Wizards, and from Thieves to Scholars) you wish each of them to belong.

A large window shows you an overhead view of your characters and the surrounding terrain; other windows and menus provide extra information and allow you to drive most of the game by mouse.

The wilderness is enormous, with many different terrain types, infested with a variety of wandering monsters. Towns, Temples and Colleges are plentiful - all activity in these is menu driven. And there are dungeons, full of puzzles, traps, and lots and lots of monsters.

Normally you only see a single character representing your whole party, but when you are attacked you get a close up of the local terrain with all your characters and the enemy shown as individual icons. On his or her turn each of your guys can, with the right skills, use their speed points to attack the enemy, move around, cast spells, use magical items, turn undead, pray for help, leech spell points from enemy magic users or dodge. They can also, if they have the right skills, examine the enemies to see how strong they are or who they are planning to attack. The detail is superb, with lots of different weapons (though no ranged ones), and dozens of different spells.



Battles at sea, against Ghost Ships, Sea Monsters or Pirates are a little different and add a nice touch of variety.

Victory in the fights brings the usual rewards - Experience Points (which you can use at Guilds to increase your characters' capabilities), Gold (so you can buy all the weapons, healing, tuition, ships, provisions, magic, etc. you need to survive), and a random selection of weapons (some of which may prove magical)!

It is worth cheating a little on the Guilds: always save before using them and make sure that your characters get worthwhile increments to their skills - if not, restore and try again! Intellect is particularly important since it determines how many skills you can learn. There are over thirty different skills, including five classes of spells and three classes of weapons, esoteric ones such as View Mind, Summon, and Berserking plus lots of standard ones like Disarm Traps and Priesthood.

Your quest leads you from the ruins of the village to a Kobold camp, where you discover that darker things may be afoot - it seems that a minor demon was behind that attack, but when you finally defeat him you discover that there is a more powerful demon behind him! As you unravel the plot you will find yourself questing to the far corners of the earth in order to defeat the Demon-God Malifon and save the whole world!

There are some nice little puzzles that you need to solve with the various artefacts you will find in the dungeons, and you will need to learn how to translate runes if you wish to succeed; but generally, as long as you follow the plot and don't wander off into the nastiest dungeons too early in the game, most of the problems are fairly straight-forward. The plot does develop, the world changes, and your characters improve rapidly as the game unfolds - you get a nice feeling of satisfaction as you complete each sub-quest, only to find the next one is a lot harder! Learn how to Wind Walk and you will always be able to escape to somewhere you can buy a new ship!

- ***GAMEPLAY** - Lots of depth, plenty to do, should keep your interest for a long time if you are into Fantasy Role Playing. Lots to explore, detailed fights, and plenty of sub-quests make for a good balance.*
- ***GRAPHICS** - Not fantastic, but more than adequate for this kind of game.*
- ***SOUND** - Minimal, but adequate for this kind of game.*
- ***VERDICT** - I thoroughly enjoyed it. As long as you can handle the extra-depth and are prepared to study the manual a little you will get a lot more value for your money than a lot of the stuff on the shelves these days!*

Title:	**DEMON'S WINTER**
Publisher:	**SSI**
Price:	**£24.95**
Reviewer:	**John Sweeney**

Deja Vu II

(Haven't I been here before?)

You're in big trouble, pal! Remember the time when you woke up in the bathroom of that sleazy bar with no memory and found out you'd been framed for Joey Siegel's murder? Thought you could rest easy after clearing your name? Not a chance! Seems Joey, who was working for Las Vegas mobster Tony Malone, left 112,000 dollars unaccounted for upon his demise. Now Malone wants his money and has you figured as the thief. He's sent several of his ... er ... friends to 'persuade' you to come up with the dough - or else!!

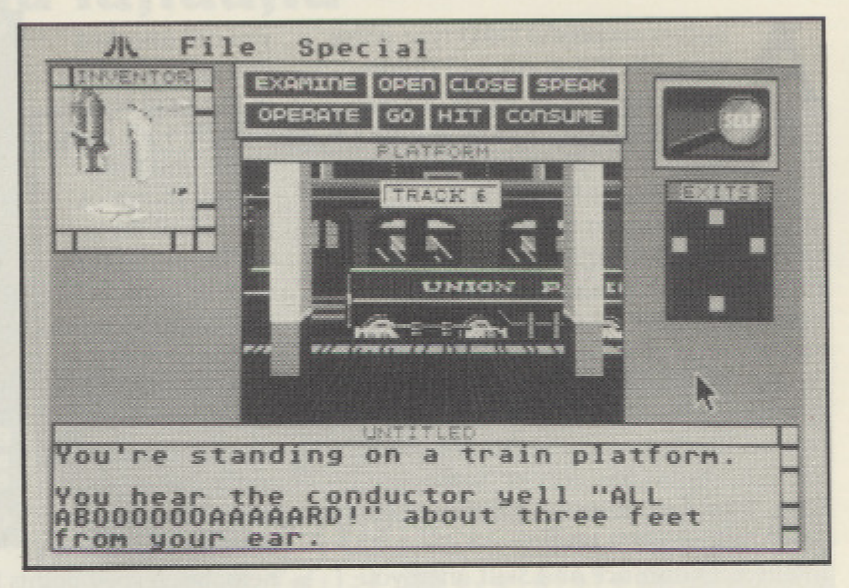
Deja Vu II is the sequel to Deja Vu: A Nightmare Comes True, the first entry in Icom Simulations award-winning series of graphic adventures (which includes Uninvited and Shadowgate). Once again you play second-rate detective Ace Harding, and once again you start off in a bathroom.

This time you've been kidnapped by Malone's thugs, brought to his hotel/casino in Vegas, grilled, beat up, tossed in a bath and given a deadline of just 7 days to hand over the missing funds. Just to keep you on your toes, one of Malone's boys follows you throughout the game, keeping an eye on your actions and popping up every now and then with grim warnings to remind you how little time is left.

The interface will be familiar from all the previous Icom adventures. On screen you have separate windows for graphics, text, exits, commands, 'self' and inventory. The command window offers eight options - Examine, Operate, open, Close, Go, Hit, Speak and Consume - while the Exits window shows all currently available (and some impossible!) ways of leaving your present location.

Most items shown in the graphics window are really 'there' and can be manipulated with the mouse by pointing, clicking, dragging and so on. Containers of various kinds can be selected and 'opened', bringing up a new window that shows their contents. (Anyone remember 'opening' the corpse of Joey Siegel in the original Deja Vu?!).

Title:	**DejaVu 2 (Lost in Las Vegas)**
Publisher:	**Icom/Mindscape**
Price:	**£24.99**
Reviewer:	**John R. Barnsley**



To get dressed in the opening scene, for example, you can select the pair of pants, drag them to your inventory window and then Operate them on yourself. Select and Open the pants to find your wallet and some important papers. Operate the cold tap on itself to run some water in the sink, and Hit the mirror for the thrilling sound of shattering glass.

There are also plenty of shortcuts. Double-clicking on most objects will give you a description of them. One double-click on an unlocked door (or the corresponding square in the exit window) opens it, and a second click takes you through it.

Make sure that you take the pants, trenchcoat and cigar ring from the hotel room when you leave, because it locks behind you and you'll need the items later. Stop first to admire the artwork in the Casino lobby, which may give you an important hint on how to win the game, then head for the blackjack tables and look for an old friend (you may have to prod his memory!).

Here, for the first time, you get to see the major enhancement in this second Deja Vu instalment: the authors have included some clever animation as found in Uninvited and Shadowgate. The dealer may wink at you before he lays down the cards; later on, you'll watch the trains arriving, gaze at passing scenery through the train window, or see birds flying across the desert.

Speaking of trains, once you've won enough money at the gambling tables you should head directly for the station and travel back to your old haunts. In fact, a better subtitle for this game might have been 'A Tale Of Two Cities', since you spend almost as much time in Chicago as in Las Vegas.

Back in Chicago, you'll return to the scene of the crime (changed in subtle ways since the first Deja Vu) and visit a number of new locations as well. This time your taxi driver is deaf, so you'll need written messages to get where you want to go to. Little by little you'll find evidence connecting the lost money with someone back in Las Vegas, where you must return for the final showdown.

'the authors have included some clever animation'

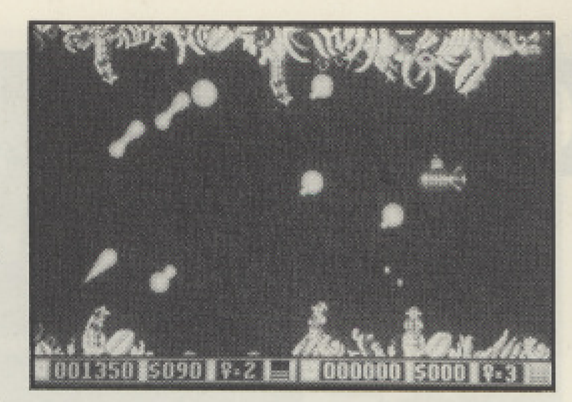
You won't end up any richer, but with luck you may at least escape with your life and if your printer is on when you finish the game, you'll have something to show for all your work. You'll also find the same kind of tongue-in-cheek humour as in the original Deja Vu, and even some of the same characters and locations. The animation and more extensive use of sounds are major improvements, as is the fact that you die less frequently.

There are only a few really difficult puzzles, the worst coming at the end as you try to figure out how to misdirect your enemies. As before, there is an over-abundance of red herrings - many exits that can never really be used and dozens of objects that have no purpose except to clutter up your inventory.

The only drawback with this game is that some commands, 'Speak' and 'Consume' for example, seemed totally unnecessary to complete the game and 'Hit' is only used in a specialised sense for blackjack.

The package comes with general instructions as well as machine-specific reference cards. So, if you enjoyed the first instalment of Deja Vu then you should not be disappointed with this one - it's like Deja Vu all over again!

BLOOD MONEY



Blood Money is the latest release from Psygnosis and is the long awaited sequel to their previous classic shoot 'em up, Menace. The story behind the game is that you, a young law abiding Venusian named Spondulix, have entered the ASP 'Alien Safari', where you must enter one of four worlds and totally annihilate as many alien creatures as you possibly can.

The game basically consists of four worlds, Gibba, Grone, Shreek, and Snuff to do battle in. Gibba is the planet of the lowest level of difficulty and will cost you 100 credits to enter. Each successive level beyond this costs 100 credits more than the previous. When you start the game you have 200 credits at your disposal and can enter either of the first two levels. To enter levels three and four you must first complete the lower, much less challenging levels.

Upon entering a 'world' you are presented with a very colourful scrolling backdrop over which the annihilation takes place. Many weird and wonderful creatures will be encountered, both large and small, as you travel through the maze-like caverns and passages of each world destroying just about anything that moves. Some creatures, once destroyed, will leave behind a credit token. These can be collected and saved up to buy various pieces of equipment for your craft at the weapons dumps, which are distantly spread throughout the maze.

The game is basically just a very hard and incredibly well presented shoot 'em up. As with many Psygnosis games the presentation is stunning! The graphics are some of the best I have ever seen and the sound and music is also of an incredible quality. Not only is it 'good looking' it is also very playable, and offers a number of interesting features including an optional two player on screen facility. This allows two players to fight together against the strange creatures of the four worlds, which can make progress much easier to achieve!

Overall, I find it difficult to fault 'Blood Money'. It is beautifully presented, very playable, and of a sufficient level of difficulty to be hard without being too frustrating, as seems to be the case with many recent releases.

FACTS

Title: **BLOOD MONEY**
Publisher: **Psygnosis**
Price: **£19.95**
Reviewer: **John Davison jnr**

SIGHT & SOUND

Absolutely fantastic! The graphics are very colourful and the scrolling and animation is super smooth. Music and sound is of very good quality

GAMEPLAY

Addictive and really quite difficult without being frustratingly so

VERDICT

Probably the best release to date from Psygnosis. A truly superb game, both in presentation and playability. Highly recommended

APB

FACTS

Title: **APB**
Publisher: **Tengen**
Price: **£19.99**
Reviewer: **John Davison jnr**

SIGHT & SOUND

The graphics are of poor quality, although the scrolling is very smooth indeed. The sound is nothing special at all

GAMEPLAY

I couldn't get on with it at all, it was both frustrating and annoying

VERDICT

Not my cup of tea at all

APB, or 'All Points Bulletin' to use its full name, is a vertically scrolling driving game converted (apparently) from an arcade machine of the same name. You play the part of an American traffic cop whose instructions are to arrest anyone who is breaking the law. Various different offenders are colour coded according to their crime and what you must do is dash up and down the highway apprehending them.

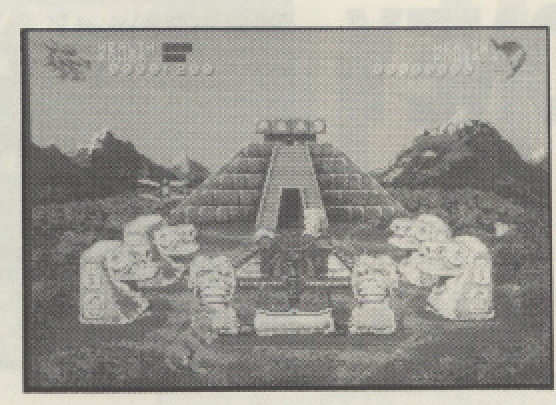
To 'nick' people is a relatively simple task. In front of your car as you travel along is a small steering wheel shaped icon, which, if you are travelling slowly is near your front bumper and when you're travelling fast is a way in front of the car. The trick is to position the icon over the offender you want to 'nick' and sound your siren by pressing the fire button. Once you have made you quota of arrests you must return to HQ and prepare for the next day.

As you progress from day to day (if you are good enough) you will be assigned missions to catch major criminals as opposed to minor offenders. These criminals include drug users and hookers who must be chased and in some cases forced off the road.

There is plenty to keep you busy throughout the game and there are various 'power ups' which can collected and attached to your car, such as extra speed or brakes. Also on later levels a gun is fitted to the front of the car to deal with the more troublesome offenders.

My personal opinion of the game is that it is not very good. I found it frustrating to play and not terribly enjoyable. The graphics are of quite poor quality, although the scrolling and animation is very smooth. In terms of sound, the music and sound effects are generally poor, although some of the sampled babbling speech heard from time to time can be quite amusing at first. As you can probably tell I'm not at all impressed by APB. I don't think it's worth the asking price of £19.99, but you might think differently. Try before you buy.

AAARGH!



This game is subtitled "The Monsters Revenge" and the theme is a reversal of the normal roles found in arcade games. As such it is quite refreshing. It is the role of the player (or players since there are two player options for this game as competitors) to take a monster, ravage a town, obtain the Roc's egg and keep it safely. The population of the towns do not like being trampled and eaten and thus they and several unpleasant marauding insects try to stop you. This is where all the fun comes in, the monster, be it fire breathing lizard or halitosis ridden Ogre, can eat people, bash or burn down buildings and generally create carnage.

Obviously all this work takes its toll and thus much eating is necessary to maintain the strength of your pet monster. This comes in the form of either fast food inside destroyed buildings or humans on the hoof, very nippy but much more tender. Of course some places also hide refueling stations for your breath weapons and some have the eggs of super horseflies that deliver a most unpleasant sting. It would seem that there really is no major problem in getting the egg, sadly keeping it is somewhat harder since the second portion of the game includes a duel with the second monster to maintain possession of the hard won egg. All this is good clean fun.

Melbourne House have produced a game that is fun to watch and although the controls are somewhat unwieldy and on occasion precise control is most frustrating, the feel of a jolly good romp is maintained. The sprites are large, colourful and humorous and although the demise of your creature is a grisly blood-soaked affair it maintains a cartoon view of things. The loading screen is well drawn although the music could be better, on the other hand the sampled monster statements 'Food!' or 'Power' are excellent and sound as though they are lifted from Scooby Doo adding further to the fun.

I enjoyed playing this game enormously and although it may pall a little after long playing the novelty value will ensure repeat plays at regular intervals. The premise is different and such originality should be encouraged.

FACTS

Title:	**AAARGH**
Publisher:	**Melbourne House**
Price:	**£19.99**
Reviewer:	**Damon Howarth**

SIGHT & SOUND

The sprites and backdrops are well defined and the sampled voices are good. The music, while appropriately bestial, leaves much to be desired

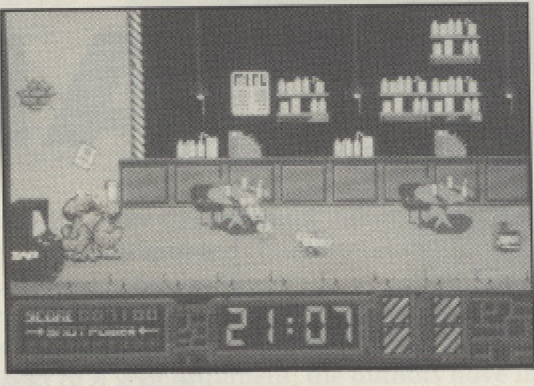
GAMEPLAY

A colourful riot with occasional hiccups in joystick control, generally good fun to play

VERDICT

A good fun game that is worth putting in someone's stocking

GILBERT:
ESCAPE FROM DRILL



FACTS

Title:	**GILBERT: ESCAPE FROM DRILL**
Publisher:	**Again and Again**
Price:	**£19.99**
Reviewer:	**John Davison jnr**

SIGHT & SOUND

The graphics are very colourful, and pretty much everything has putrid green snot dripping from it! The music is very good but the sound effects are awful!

GAMEPLAY

I found it a bit boring, but no doubt young children would find it good fun

VERDICT

I can't help feeling that this is yet another game which ends up being just a 'cash-in' on the name of the main character

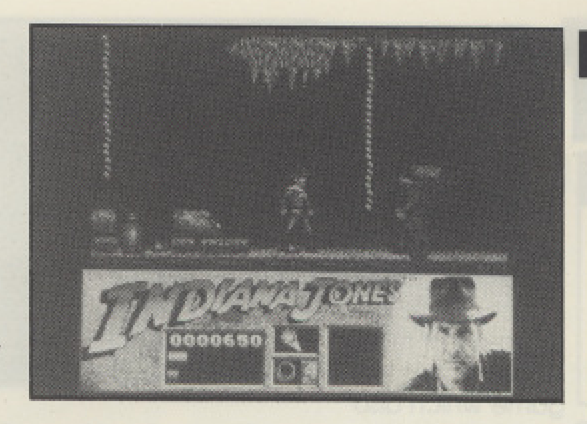
Gilbert, the disgusting slimy and snotty alien television character has finally made it to the world's computer screens! Every parent's least favourite alien now has the chance to spread his lavatorial humour to the very depths of every child's imagination. The thing is though, no matter how much some people complain, it is difficult not to find some of it very amusing.

There is no doubt that Gilbert is very definitely a cult character with the non-children of this world, and in this game he has returned to his home planet of Drill and is feeling very pleased with himself. Unfortunately, the rest of his fellow Drillians are a little less pleased and are apparently green (and slimy!) with envy, as Gilbert has been invited back to Earth to do a new television series. To prevent this and further inflation of his already incredibly huge ego the Drillians have removed parts of Gilbert's ship, the Millenium Dustbin, and have spread them around the planet. You control Gilbert as he searches for these parts (what a surprise!) and have only twenty four hours to find them.

What you must do is roam around the planet arcade adventure style and beat the Drillians at a number of arcade machines which are dotted around the place. These simple games have some wonderful names such as 'Snot Fight At The OK Corral' and other equally disgusting ones. Completing an arcade game will give you a clue as to where the missing parts of the ship are.

Whilst this may sound a great deal of fun, the game doesn't capture the overall obnoxious attitude of Gilbert. On TV he has to be seen to be believed, but this game seems to do little more than cash in on the character. The 'arcade games' are no more than very simple old games such as Space Invaders or Snakes. The idea had tremendous potential, but it never seems to hold my attention for long enough, and because of this I have not managed to get very far. Most of the time I felt I was just moving Gilbert around various passages aimlessly trying to give him something to do.

INDIANA JONES



To the striking and famous chords the loading screen to this spin off game comes up and the faithful reproduction of the sound heralds a game that is worthy of the licence.

There is always a danger that film licensed games try to get by on the name of the film and put in scrappy game play and ideas but this is not one of those sort at all. A four part game it follows some of the major events in the film and does it with the panache that the Jones Boys would be pleased to associate themselves with. Even the copy protection routine is cleverly embedded in the depths of the game.

Sadly the games are very difficult and with prevailing deadlines I have not completed all of the action but the distance I have gone convince me the game is well worth continuing.

The first portion of the quartet involves young Indy making his first contact with the Cross and meeting his nemesis in a platform and ladders game which involves a lot of tricky timing problems. The lighting of this level depends on torches picked up on the way and culminates in a dash across the train as in the film.

In the next level, the adult portion of Indy's game life, the copy protection is revealed as the choice of doors to the vaults is listed only in the instructions and it all depends on the days date. Successful completion of this entails a climb to a subsequent new level. This one involves the escape on the airship and the hunt for the Grail diary comprising a pick up and search game. Finally the actual hunt for the Grail is necessary to save Mr. Jones senior but I have not reached this part yet. Each level is introduced by a still from the film representing the part of the plot involved with that particular level.

I have enjoyed this game and it is of high quality in graphic and music tones, definitely better than previous Indy adventures and it should be enjoyed by most arcade addicts. It is a pity that the early parts are so difficult to come to terms with although were they easy the game may not have the necessary long term appeal. A good game to buy younger members of the family.

FACTS

Title: **INDIANA JONES AND THE LAST CRUSADE**
Publisher: **Lucasfilm Games**
Price: **£19.99**
Reviewer: **Damon Howarth**

SIGHT & SOUND

The sound is a good sample of the theme together with strong spot effects, lighting and sprite effects are also creditable

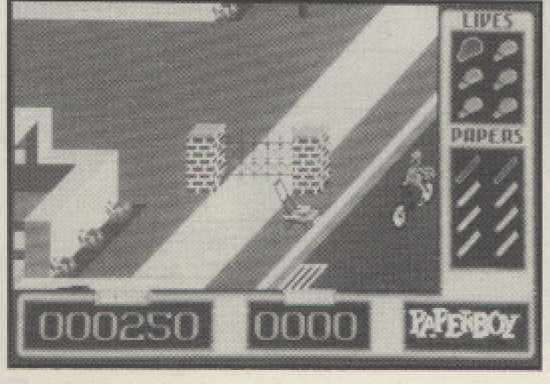
GAMEPLAY

Difficult but addictive, the sprites are well handled and response to controls is good

VERDICT

A good game for those with strong arcade skills or who like the Indy adventures. Probably well worth a look

PAPERBOY



FACTS

Title: **PAPERBOY**
Publisher: **Elite**
Price: **£19.99**
Reviewer: **John Davison jnr**

SIGHT & SOUND

The graphics are very colourful and close to the arcade original. The sound consists of a pleasant little ditty playing in the background

GAMEPLAY

In my opinion - too hard. However, those of you who are experts at the original will probably find it acceptable

VERDICT

Certainly not the most wonderful arcade conversion, but fans of the original will enjoy it

Many people expected this particular arcade conversion to be released on the ST ages ago and have been waiting patiently for some time. It's finally here and it is not bad at all.

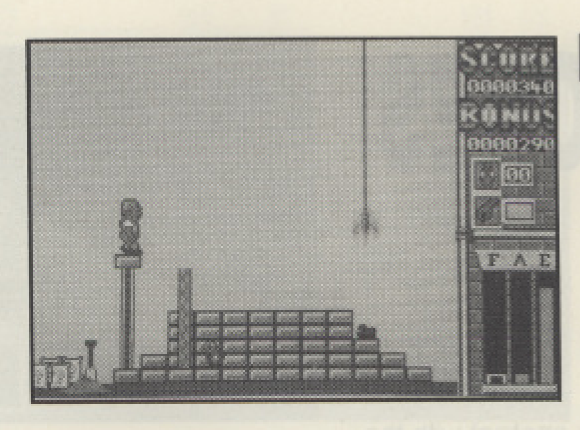
You play the part of (guess what?) a paperboy, who must cycle through a typical American suburb slinging his papers from his bike to the various houses in the neighbourhood. This may sound very simple, but to hinder our young hero's progress there are many different hazards he must avoid, such as lawnmowers, remote controlled cars, dogs and pedestrians, all making the delivery much more difficult.

Each 'level' of the game is one morning of the week, i.e. you start on Monday and work your way through. If you manage to complete a whole week's deliveries then you move on to the next, more difficult street. At the end of each level or street is a small park which must be cycled through as fast as possible, leaping over ramps and throwing all the remaining newspapers at targets dotted along the side of the track in order to score bonus points.

Paperboy is basically a diagonally scrolling affair with some good graphics. Unlike many arcade conversions it is actually quite close to the original, both graphically and also in the way it plays. The arcade machine was difficult, as is its home computer cousin. In some ways though I would say that this version is in fact too hard. It is very difficult to successfully complete one morning's delivery without being knocked off your bike by something or other. So far I have not managed to get past Thursday on the lowest level of play, 'Easy Street', and when you just can't get any further with a game due to the difficulty I find it frustrating.

Whether or not it was worth the wait I'm not sure. I was a big fan of the arcade original and whilst this brought some of its 'magic' to the ST I can't help feeling that there is something missing. It is, however, a commendable conversion from an impressive arcade game and I would imagine that many people will enjoy it.

HIGH STEEL



The instruction to High Steel seem far too short to convey what seems to be a complicated message but happily the game made sense after a couple of attempts and after a few more tries I found it possible to go somewhere in it.

It is the players job to construct levels of a building using bricks and girders by planting the girder, climbing it and laying a brick. this task is made harder by gremlins dropping from the invisible overhead crane and also by the assorted banana skins and unpleasant mothers who can kill on contact. It is also necessary to deduce the loading system of the overhead crane to ensure that upwardly mobile buildings are a possibility.

The game can be described as a simple pick up and place, build your own, platform and ladder game but that is really not a fair description. Personally I felt it to be a fast moving strategic game which also needed a swift hand on the joystick. I found the graphics quite enchanting and even though the game is available on popular 8 bits the standard of sprites is high. Some creatures appear to have come from memories of old Huckleberry Hound shows and that exemplifies much of the action. The sound effects and sights of the various falling objects together with the stunned looks of the builder add to the charm of a very good game and while I do not see it ranking with the so called Mega Games this one has a charm and feel all it's own.

It is probably a good thing that the screen is as helpful as it is since the instructions can tend to confuse the user and indeed once the basic concept is grasped that only one thing at a time may be carried and that girders can only be securely planted on empty spaces the game is self explanatory.

Both sound effects and music are pleasant and adequate to the ear and some spot sounds are in fact essential to the enjoyment(?) of your own demise. This is another good and original game that deserves a great deal of success. I found it hard to stop playing and the addictive factor was high. A game that could end up keeping you occupied much longer than your first impressions lead you to believe.

FACTS

Title: **HIGH STEEL**
Publisher: **Screen 7**
Price: **£19.99**
Reviewer: **Damon Howarth**

SIGHT & SOUND

Sound is more than adequate while the graphics are humorous and colourful

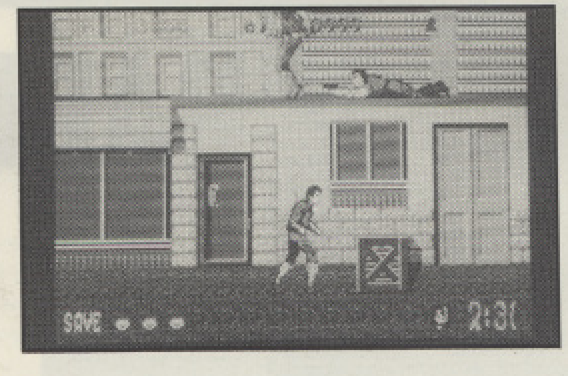
GAMEPLAY

Fun, fast and furious. As the levels rise so does the blood pressure and fun. Good joystick recognition too

VERDICT

An original game well worth buying. Apart from the instructions, wonderful

SHINOBI



FACTS

Title: **SHINOBI**
Publisher: **Virgin Games**
Price: **£19.99**
Reviewer: **Damon Howarth**

SIGHT & SOUND

The sound mainly works on spot effects and is very Jackie Chan, the sprites are large and adequate and fairly average

GAMEPLAY

More than adequate although at times a little samey and not as quick as it could be

VERDICT

Not bad as far as it goes, better than many although not the best, try it first

This is a SEGA coin-op conversion and so will be familiar to those of you who haunt amusement arcades. The plot is quite a simple one of saving the lost children from the marauders as one of the Ninja School's most illustrious heroes.

The game proceeds in the traditional manner with a good response to the joystick and some very strong spot effects. The screen scrolls slowly and some of the action can be a little jerky, although in the main the whole piece is of an acceptable standard.

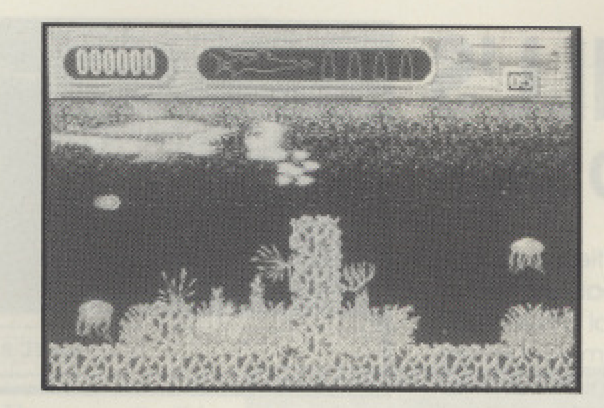
It is disappointing that there seem to be so few levels as although I only managed to reach the third location before meeting my fate there did not seem to be any option to progress past level four except for the probability of starting again at the beginning and working harder the second time through.

The screens are colourful and can be quite busy, and it seems that your ninja has an inexhaustible supply of Shuriken although these are promoted to more dangerous missiles as bonus points are amassed for saving children. Some of the more esoteric parts of this game come from the use of Ninja magic to help the hero escape from lethal problems and also the relative inaction of the opposition unless they are being directly confronted. The only real danger comes from the men with guns who are quite capable off screen. The two level jumping feature which enables the fighter to travel and kill on rooftops needs using with some timing and care and can prove to be a lifesaver.

Shinobi is probably as good as many of it's rivals and certainly better than others but on the other hand it does not generate the feel of the very best of it's genre and so I found it slightly disappointing. The inlay card that describes the kidnapping of the children shows more promise than is actually manifested. The game is workman like in its construction and as such probably reflects the original quite well. Where it puts in special effects, as in the Ninja magic sequences it does it very well but the rest of the game is fairly pedestrian.

Maybe a game of interest only to the enthusiast.

JAWS



Being a 'Jaws' fan, I was anticipating an enjoyable action/strategy game as I viewed the impressive loading sequence ... in a cinema, with the familiar bass lines of the Jaws theme pounding out and the scene of a shark happily digesting an unwary swimmer! However, I'm afraid that - for me - was the best part of the game.

You play the part of Brodie and the object of the game is to hang on to your job as Amity's Chief of Police, by keeping as many beaches open as possible and the swimmers death toll at a minimum, whilst searching for the equipment and special weapon to deal with the shark. You must first recover the four sections of the gun and the special bullets from the nastie-infested caverns below the reef.

Much of the gameplay involves the exploration of an aquatic maze in a submersible contraption, popping missiles at all and sundry. When your special weapon is assembled, one member of your party has to attempt to destroy Jaws with the weapon. The chosen member then has a time limit of just 80 seconds of air and four special bullets to do the business.

There is a certain strategy element involving the opening and closing of several beaches, but this is very basic and makes very little difference to the player's progress. Your degree of success during the game is presented by way of a 'Mayorometer', which indicates the Mayor's reaction to beach closures and deaths.

Sounds simple, yet the game lacks playability and sustained interest. The animation is jerky and uninteresting with the sound effects - apart from the loading sequence - being very basic indeed. The pulse does race a little when old Jaws enters your current playing screen, but that's about all!

The Jaws concept, via book and subsequent films, was a huge success and the computer game should at least equal the excitement generated. Sadly, this is not the case and with software at ST prices we have come to expect better. A great disappointment.

FACTS

Title: **JAWS**
Publisher: **Screen 7**
Price: **£19.99**
Reviewer: **John R. Barnsley**

SIGHT & SOUND

Poor background graphics and flickery animation. Apart from the opening sequence, the sound is out of place for a 16-bit machine

GAMEPLAY

Shows promise initially but enthusiasm soon wanes as the game progresses

VERDICT

At this price, forget it - buy a goldfish instead!!

RICK DANGEROUS

FACTS

Title: **RICK DANGEROUS**
Publisher: **Firebird**
Price: **£24.99**
Reviewer: **John Davison jnr**

SIGHT & SOUND

The graphics are colourful, detailed, and well drawn in an amusing cartoon style. Sounds are all high quality samples used to good effect.

GAMEPLAY

One of the most enjoyable releases for the ST I have ever seen. It is totally addictive.

VERDICT

Absolutely Brilliant!

This latest release from Firebird is possibly the most enjoyable game I have played in a very long time. I'm not normally a sucker for ladders and platforms style games, but this is most definitely an exception.

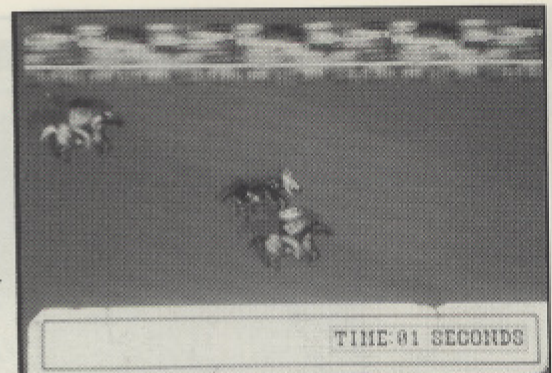
The year is 1945 and you play the part of Rick, the Indiana Jones style intrepid explorer, who must move around the various tombs and temples armed with a revolver, dynamite, and his "big stick" collecting treasure. Throughout the levels Rick will encounter a large number of traps and guardians who are out to stop him from completing his mission, which is to solve the puzzles and collect all the treasure he can safely lay his hands on.

Throughout the game there are many amusing little moments which add to the overall enjoyable 'atmosphere' of the game. Rick Dangerous is a game which is genuinely fun to play, something which can not be said about many releases over the last couple of years. Whilst the idea behind the game is not exactly original the way in which it is executed is truly superb. There are four missions to complete each consisting of thirty scrolling caverns and passages. Rick's exploring takes him from Aztec temples to Egyptian tombs - all of which have cunning traps and puzzles which must be overcome using the few resources at his disposal.

The graphics are really superb, all of the characters in the game, although very small, are very well detailed in an amusing 'cartoon' type style. The sound effects are all sampled and are used to excellent effect and some, coupled with the graphics and animation, could only be described as tastefully 'cute' (check out the little Aztec warriors when you shoot them!).

There just isn't enough room here to say how much I enjoyed this game. It is not very often that a game comes along which I take the greatest pleasure in reviewing, but Rick Dangerous is definitely one of my all time favourites. It is simple but incredibly playable, while remaining challenging enough to guarantee your addiction to it. If only more games were of this calibre life as a reviewer would be much more fun!

BUFFALO BILL'S
WILD WEST RODEO SHOW



Buffalo Bill is another entry in the age old 'multi event' sports game format. This particular incarnation, as expected from the title, is based around a 'Wild West' theme. It includes six events in all, ranging from knife throwing to steer wrestling. The game comes on three disks and the different events are controlled using either the joystick or, in some instances, the mouse.

Such a large game really needs more space than available here to do it justice so I will just briefly take you through each of the six events

The first event to load is the knife throwing. This can be controlled with the joystick, or more accurately with the mouse. The view of the proceedings is a 3D view from just behind your contestant's right arm. In the background is a large rotating disc onto which is tied a young maiden. You control a cursor to aim your knives, which can then be thrown by pressing the mouse/joystick button. The closer the knives land to your assistant the higher score you receive.

The next event is the trick shooting, which is divided into two separate parts. The first has you using your sights to aim your sixshooter at targets which 'pop up' around the desert landscape. Part two has you shooting bottles, which are thrown into the air by your assistant.

The events that follow are of a very different style to the first two. Bronco riding has you sitting astride a mean bucking bronco, on which you must desperately try to remain seated! Stage Coach rescue involves chasing a stagecoach, which has been hijacked by an Indian. You have to save the stagecoach and its occupants by climbing onto the top of the coach and beating the Indian senseless. The fifth event, calf roping, involves riding along on horseback trying to lasso a nimble footed calf. Finally, steer wrestling has you battling away trying to wrestle a steer to the ground.

The graphics throughout are nothing short of stunning! Each screen obviously has far more than sixteen colours and all of the pictures and sprites are drawn to an extremely high standard. In terms of sound the game has some superb sampled spot effects, but the music is quite painful in places.

FACTS

Title: BUFFALO BILL'S WILD WEST RODEO SHOW
Publisher: Tynesoft
Price: £19.95
Reviewer: John Davison jnr

SIGHT & SOUND

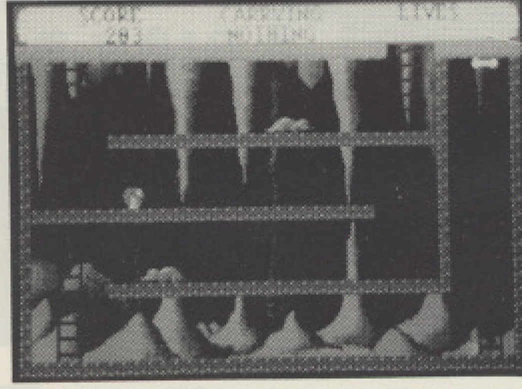
The graphics are incredible! The colours displayed on screen are simply astounding. Music is dire, although sound effects are great

GAMEPLAY

A bit tedious and not very addictive

VERDICT

A very good graphics demo! It shows very well the quality of the ST's graphics capabilities



CHUCKIE EGG II

FACTS

Title: CHUCKIE EGG II
Publisher: Pick and Choose
Price: £19.95
Reviewer: John Davison jnr.

SIGHT & SOUND

Drab graphics to begin with giving way to some nicely drawn and animated screens but the music is best turned off as are the sound effects!

GAMEPLAY

Tough! Whilst the game is well thought out, the actual control will take a lot of mastering. At least you have a lot of lives to play with

VERDICT

A game for the hardened addict. If you want a real challenge, this will give you one but less than excellent players might soon give up

This is a sequel to the original Chuckie Egg game that was available on the Atari 8-bit and various other computer formats. The intrepid hero, 'Hen House Harry' has now moved into the manufacture of chocolate eggs. He has to collect all the ingredients to make the 'Choccy Eggs' and also the components of the toys that go inside them.

Before doing these things in the factory, you have to actually get into the place first. This is a challenge in itself. You can soon work out what you use to distract the guard dog protecting the entrance to the factory, however, getting to this object involves negotiating a maze guarded by creatures that pose a serious problem if your abilities with a joystick are not up to scratch! Once inside, you move along the platforms and up and down ladders collecting and using the various objects scattered around the reputed 120 screens.

The game at first appears to be of very low quality graphically, considering the ST's capabilities. However, when you are inside the factory, the simple ladders and platforms are set against more impressively drawn background pictures. The sound consists of a repetitive, annoyingly nauseating, bouncy little tune, which fortunately can be turned off, only to reveal the equally irritating sound effects.

After spending several sessions testing out this game I still find many aspects concerning its playability as frustrating as on the first occasion I played it. The precise control of Hen House Harry's movement around the screen is ultra-critical and extremely difficult. He has a nasty habit of bouncing into every obstruction around the place. Fortunately, you start off with more than the average number of lives for a game of this type.

My overall opinion is that Chuckie Egg II is virtually unplayable. It is one of the few recently released titles that is genuinely frustrating. It is a long time since a game has made me want to hurl the joystick through the screen-!Depending on the type of person you are, this can be good if you enjoy a real challenge, but should be avoided if you are a bad loser.

TANKATTACK

1. *Tankattack is NOT a computer game in the normal sense. It is a computer/board game, wherein you and your friends play a board game with lots of little plastic tanks and armoured cars on a colourful board. The computer acts only as gamesmaster, resolving combat and 'throwing dice' to decide on variables such as the weather.*

2. *There is no solo option. You cannot play against the computer - you need 2-4 people to play the board game; the computer just helps run the game and provides some pretty pictures - it never actually plays the game itself.*

At this point I suspect most of you will have lost interest, I can't really blame you! Especially when you realise that the computer doesn't even keep track of the position of your pieces on the board! This means that YOU have to work out all the rules regarding movement across different types of terrain, YOU have to work out whether or not it is legal to fire on a particular enemy piece, and then YOU have to tell the computer which type of tanks are fighting and at what range! The least I would have expected in a game of this nature was that the computer would have done all those things to save you all the hassle and to enforce the movement/ range rules, so that you didn't have to worry about details like whether you are in line-of-sight of your target and whether or not a particular tank has fired yet on this turn.



Title:	**TANKATTACK**
Publisher:	**CDS Software**
Price:	**£24.99**
Reviewer:	**John Sweeney**

The game itself is a fairly standard war game played on a map of about 22 x 23 hexes. There are some rivers, mountains and villages which affect your ability to move and fire and each of the four nations has two Repair Depots and a half share in a Rebuilding Yard. There are predefined alliances between Armania and Kazaldis, and between Sarapan and Calderon, so even with four players there are only two sides involved - you are not allowed to attack your allies. Each player gets one or two armoured divisions to deploy, each consisting of 2 Light Armoured Cars, 2 Medium Armoured Cars, 2 Light Tanks, 3 Medium Battle Tanks, and 3 Main Battle Tanks. (You tell which tank is which by counting the number of plastic dots on the back!)



So, if the computer doesn't do any of the useful hard work, what exactly does it do? Well, it shows you some nice graphics - the icons which you use are animated - a very nice touch! It works out what the weather is like and keeps track of how many units you have left in action (or being repaired/ rebuilt) and also your morale. It uses this data to decide how many movement points you get on each turn. For each fight that you tell it about, it shows you a nice animated scene of your tank grinding across the screen and firing at the enemy, followed by an on-screen printout of the result (at which time it may allow you to send a tank for repair). And it shows a page of a newspaper at the end of each round giving some indication of the state of the war and the weather forecast, complete with meteorological chart!

Unfortunately there are a couple of problems with the implementation of all this:

Every time you enter a command to the computer, or it wishes to report on an event, it insists on playing it back to you on a simulated teletype for confirmation, wasting about eight seconds each time. The animated fighting sequences have some nice graphics and there are a few minor variations, but basically they are so similar every time that they soon get very tedious. The newspaper looks good to start with, but obviously has a fairly limited set of standard phrases to juggle with and the novelty quickly wears off.

And there are a few bugs: e.g. the newspaper sentences are often garbled or repeated; if a repair is complete but you had two identical tanks being repaired it doesn't identify which one is now ready; and despite the fact that there are five different classes of tank it doesn't ask you which one you are using when you attack the enemy HQ (the object of the game!) - whereas it needs to know to resolve any ordinary battle!

If you want a good Tank Board Game then I suspect there are better ones on the market than this that don't need a computer, and the implementation on the computer is so slow that you could throw your own dice and look up a Combat Resolution Table a lot faster!

- ***GAMEPLAY** - Fairly standard war game - I personally did not feel enough use of the computer had been made to make it worthwhile.*
- ***GRAPHICS** - Excellent, but limited - no interaction.*
- ***SOUND** - Minimal effects.*
- ***VERDICT** - Could have been a lot better. Probably not a bad little computer-aided war game, if that's what you're after.*

THE STOS COLUMN

A full game to type in, a useful subroutine, lots of news plus a review of a new flight simulator program written in STOS and more besides! - Peter Hickman has been busy!

This issue's column, is a real mish-mash of news, reviews and type in listings. Since the last issue so much has happened with STOS it's hard to know where to begin.

FIRST THE NEWS

Chris Payne (marketing manager of STOS) has sent me the latest issue of the STOS User Club newsletter and what can I say except it's great. I was one of those cynics who really did not believe that Mandarin would be supporting STOS for very long so I never even bothered to send off my registration card, which was a great mistake because the newsletter is both well written and packed with useful information (a bit like this column!!!). So if you want more STOS info than I can provide in these few pages send your cheques and postal orders for ten pounds (that's for six issues) off to Aaron Fothergill who is the new editor of the newsletter (his address can be found at the end of the article next to mine). The release of AMOS (the Amiga version of STOS) has, alas, been delayed until January, I have seen the specifications of the new language and without hyping it too much AMOS looks pretty mindblowing.

What next? Ah yes, more news, Mandarin are hoping to launch various new STOS products over the next few months, these have been designed to complement the existing STOS range and allow you to add extra fancy bits to that next mega game you are writing (you are writing a mega game I assume??). Seriously though the first release is the STOS Gamespack which contains four of the top entries for the recent STOS competition (including one from Aaron Fothergill), each game has been compiled but the source code will be on side two of the disk so everybody can dissect, disembowel, cut up and generally mutilate the games to suit their own taste. The second autumnal release is STOS Musician, a full featured music editor similar in design to programs like the Music Construction Set by Electronic Arts or the Music Studio by Activision (only much better), this editor will run as an accessory and will include a MIDI input option.

By spring '90 Mandarin will also have a version of the Vidi ST Digitiser (by Rombo Productions) with all accompanying software written in STOS, imagine grabbing video images and turning them into sprites for that forthcoming mega game. Wow! Last but not least is STOS 3D which (surprise surprise) is a 3D extension for STOS and includes features such as full animation and collision detection for any 3D object. Oops, I almost forgot Stephen Hill (author of the pretty ok, not too bad, better than most I've seen, STOS manual) has a book coming out (it should be in the shops as you read this) titled- GAME MAKERS MANUAL: ATARI ST and STOS BASIC, it will be published by Sigma Press and has a provisional price of £11.95, the question is will it be ring bound? As these products become available I will be doing full reviews including a VFM (value for money) guide based on how badly you need these extra's in order to write decent software. The only thing is I'm going to

```
10 rem GUARDIAN
20 rem BY P.J.HICKMAN FOR NEW ATARI USER
30  :
40 key off : curs off : click off : hide on : mode 0
50 reserve as screen 6 : logic=6
60 cls physic : cls logic
70 X=50 : Y=50 : SC=0
80 XEN=150 : YEN=150
90 XFRU=rnd(200)+50 : YFRU=rnd(100)+50
100  :
110 sprite 5,0,100,5 : move x 5,"(1,4,79)(1,-4,79)1" : anim 5,"(5,5)(6,5)L"
120 sprite 4,159,0,7 : move y 4,"(1,4,49)(1,-4,49)1" : anim 4,"(7,5)(8,5)L"
130 anim on : move on
140 sprite 1,XFRU,YFRU,4
150 sprite 2,XEN,YEN,1
160 sprite 3,X,Y,2
170 wait vbl : screen swap : wait vbl : cls logic
180 timer=0
190  :
200 repeat
210 if jleft then X=X-5
220 if jright then X=X+5
230 if jup then Y=Y-5
240 if jdown then Y=Y+5
250  :
260 if X>XEN then XEN=XEN+6
270 if X<XEN then XEN=XEN-6
280 if Y>YEN then YEN=YEN+6
290 if Y<YEN then YEN=YEN-6
300  :
310 if X<0 then X=310 else if X>310 then X=0
320 if Y<0 then Y=185 else if Y>185 then Y=0
330  :
340 sprite 1,XFRU,YFRU,4
350 sprite 2,XEN,YEN,1
360 sprite 3,X,Y,2
370 wait vbl : screen swap : wait vbl : cls logic
380  :
390 HIT=collide(3,14,16)
400 if HIT=2 then bell : inc SC : XFRU=rnd(200)+50 : YFRU=rnd(100)+50
410  :
420 until (HIT=4 or HIT=16 or HIT=32) or timer>=1000
430 if timer>=1000 then MESS$="  TIME UP!" else MESS$="YOU ARE DEAD"
440 boom : wait 20 : sprite off : locate 12,10 : print MESS$ : locate 12,12 :
print "YOU SCORED";SC : screen swap
450 wait key : default
```

GUARDIAN - See also the table on the opposite page

need an upgrade to fit all of these extensions into memory.... AAAAARRRRGGGHHHH!

AN EXCLUSIVE REVIEW

Here it is, the exclusive (well nearly) mini review of Skystrike Plus, one of the first STOS games to be released independently of Mandarin. Skystrike Plus is a WWII fighter pilot game written by that clever chappie Aaron Fothergill of Shadow Software (he gets everywhere doesn't he!), and believe me if the program did not have 'STOS' plastered all over the credits you would be forgiven in thinking Aaron is a assembly language whizz.

The game is quite large and comes on two disks so loading is a bit slow, although a nice digitised soundtrack and loading screen make up for that. Once you get through the fancy bits such as the vertically scrolling credits on a horizontally scrolling background you swap disks and are faced with a nice menu with various options including a demo mode and instructions. The interesting thing about the menu is that it hovers above an airfield and occasionally a plane will do a fly past, it's things like this that turn an average program into something special.

After selecting the play game option the screen clears and the game begins. In Skystrike Plus your plane, a versatile spitfire, is viewed from the side and gives the game a Choplifterish look. Your first lesson is taking off, the spitfire uses the 'push up to rotate clockwise' method of manoeuvering and I crashed while attempting my first take off!

Once the controls are mastered (it soon becomes second nature) it's off to attempt your first mission- shoot down two enemy fighters attacking your runway. Your plane mimics the fight pattern of a spitfire to a reasonably accurate degree, occasionally it will begin to lose speed and you will have to do a quick climb and dive if you do not want to stall. If you get damaged during the dogfight (you cannot be killed by one hit, first individual systems fail then you die) you will have to make a landing to get repaired. Once the mission is completed you guide your plane back to base and land (which is a whole job in itself) and you are given another mission. There are fifty six missions in all, dogfights, bombing runs, trains to disable, there is even a railway tunnel to fly through, other features

continued overleaf

```
ORIGINAL FILENAME : GUARDIAN.MBK
BANK NUMBER :   1
BANK LENGTH :   1280

-----------------------------------------------------------------------------
! Adrs !                          Datas                          ! Check !
-----------------------------------------------------------------------------
! 0000 ! 1986  1987  0000  0012  0000  047C  0000  047C ! 03C17 !
! 0010 ! 0008 *0006  0064  0110 *0004  0104  010D *0004 ! 3039B !
! 0028 ! 0186  0110 *0004  0226  0110 *0004  02C6  0105 ! 2099F !
! 003C !*0004  02F8  0105 *0004  032A  0110 *0004  03CA ! 30C0D !
! 0052 ! 0110  0000  5041  4C54  0000  0666  0070  0000 ! 0A47B !
! 0062 ! 0770  0420  0430  0450  0555  0333  0733  0373 ! 0273E !
! 0072 ! 0773  0337  0737  0377  FC3F  F00F  E007  E007 ! 3C1B4 !
! 0082 ! C003  C003  8001  8001 *0004  2000  B005  F80F ! 54820 !
! 0094 ! FC1F  FE3F  FF7F  0000  03C0  0000  03C0  0000 ! 3015D !
! 00A4 ! 0FF0  0000  0FF0  00A0  1F58  00A0  1F58  0050 ! 06020 !
! 00B4 ! 1FA8  0050  1FA8  0C00  3354  0CA8  3304  1800 ! 0D6A0 !
! 00C4 ! 2678  1984  2600  1800  6602  19FC  6602  0C00 ! 16FFC !
! 00D4 ! 7326  0CD8  7326  C001  3FFE  0000  3FFE  FFFF ! 33320 !
! 00E4 ! 3FFC  3FFC  3FFC  CFFF  0000  1FFC  0000  47FA ! 1F7E9 !
! 00F4 ! 0000  0FF8  0000  03F0  0000  07F0  0000  01E0 ! 01DB8 !
! 0104 ! 0000  03E0  0000  00C0  0000  01C0 *0006  0080 ! 106E6 !
! 0118 ! 0000  F03F  C00F  8007  8007  0003  0003  0003 ! 2B065 !
! 0128 ! 0003  0003  8007  8007  C00F  F03F  0000  0FC0 ! 2C022 !
! 0138 ! 0000  0FC0  0140  36B0  0940  3EB0  00A0  6F58 ! 0FF98 !
! 0148 ! 10A0  7F58  0000  5EA8  2150  7E08  0000  DCF4 ! 26AEC !
! 0158 ! 2308  FC04  0000  FC04  03F8  FC04  0000  FE4C ! 41958 !
! 0168 ! 01B0  FE4C  0000  FFFC  0000  FFFC  0000  FF0C ! 3FF00 !
! 0178 ! 00F0  FF0C  00F0  7E00  01F8  7E00  0060  7F08 ! 27E4C !
! 0188 ! 00F0  7F08  0000  3F90  0060  3F90  0000  0FC0 ! 10F38 !
! 0198 ! 0000  0FC0  FFCF  FF8F  FF1F  FF3F  E107  C003 ! 5AE86 !
! 01A8 ! 8001  8001 *0006  8001  8001  C003  E007  F81F ! 59833 !
! 01BC ! 0030  0000  0030  0000  0070  0000  0070  0000 ! 00140 !
! 01CC ! 00E0  0000  00E0  0000  00C0  0000  00C0  0000 ! 00340 !
! 01DC ! 0080  1E78  0080 *0004  3FFC *0004  0038  7FE6 ! 2DF9A !
! 01F0 ! 0038  0000  001C  7FF2  001C  0000  001C  FFF3 ! 18071 !
! 0200 ! 001C  0000  000C  FFFB  000C  0000  000C  FFFB ! 20036 !
! 0210 ! 000C  0000  0004  7FFE  0004 *0004  7FFE *0006 ! 3001A !
! 0226 ! 3FFC *0006  1FF8 *0006  07E0 *0004  FFC7  FF8F ! 5673A !
! 0240 ! FF1F  FF3F  FE7F  FE7F  FE3F  FC1F  F88F  E1C3 ! 7D00C !
! 0250 ! C1C1 *8006  C1C1  E3E3  0038  0000  0038  0000 ! 3E7DB !
! 0264 ! 0070  0000  0070  0000  00E0  0000  00E0  0000 ! 002A0 !
! 0274 ! 00C0  0000  00C0  0000  0180  0000  0180  0000 ! 00480 !
! 0284 ! 0180  0000  0180  0000  01C0  0000  01C0  0000 ! 00680 !
! 0294 ! 03E0  0000  03E0  0000  0770  0000  0770  0000 ! 016A0 !
! 02A4 ! 0220  1C1C  0220  1C1C  0000  3E3E  0000  3E3E ! 0B8F4 !
! 02B4 ! 0000  7F7F  0000  7F7F  0000  7F7F  0000  7F7F ! 1FDFC !
! 02C4 ! 0000  7F7F  0000  7F7F  0000  3E3E  0000  3E3E ! 17B7A !
! 02D4 ! 0000  1C1C  0000  1C1C  EFBE  C71C  9249  38E3 ! 2BA3E !
! 02E4 ! 7DF7 *0004  1041 *0006  38E3 *0006  6DB6 *0006 ! 534E7 !
! 0302 ! C71C *0006  8208  0000  7DF7  38E3  9249  C71C ! 45969 !
! 0316 ! EFBE *0004  8208 *0006  C71C *0006  6DB6 *0006 ! 6A6AE !
! 0334 ! 38E3 *0006  1041  0000  3FFF  9FFF  CFFF  E7FF ! 3E126 !
! 0348 ! CFFF  9FFF  3FFF  9FFF  CFFF  E7FF  CFFF  9FFF ! 577F8 !
! 0358 ! 3FFF  9FFF  CFFF  E7FF *0004  C000 *0006  6000 ! 5B806 !
! 036E !*0006  3000 *0006  1800 *0006  3000 *0006  6000 ! 4D818 !
! 038E !*0006  C000 *0006  6000 *0006  3000 *0006  1800 ! 56818 !
! 03AE !*0006  3000 *0006  6000 *0006  C000 *0006  6000 ! 5B018 !
! 03CE !*0006  3000 *0006  1800  0000  E7FF  CFFF  9FFF ! 4A009 !
! 03E6 ! 3FFF  9FFF  CFFF  E7FF  CFFF  9FFF  3FFF  9FFF ! 4E7F8 !
! 03F6 ! CFFF  E7FF  CFFF  9FFF  3FFF *0004  1800 *0006 ! 58005 !
! 040C ! 3000 *0006  6000 *0006  C000 *0006  6000 *0006 ! 5B018 !
! 042C ! 3000 *0006  1800 *0006  3000 *0006  6000 *0006 ! 4D818 !
! 044C ! C000 *0006  6000 *0006  3000 *0006  1800 *0006 ! 56818 !
! 046C ! 3000 *0006  6000 *0006  C000  0000  0180  F81F ! 449AB !
! 0484 ! FC3F  BF77  0180  7C3E  FC3F  DF6F  0180  3C3C ! 452DE !
! 0494 ! 7C3E  7F6E  0180  1818  381C  3B5C  0180  0004 ! 18A40 !
! 04A4 ! 0000  0034  F2EE  A0A6  FE00  0000  0028  2CFE ! 2BEEE !
! 04B4 ! 0000  0010  2CFE *0004  2CFC  0000  0001  202C ! 17A3B !
! 04C6 ! FE00 *0004  2CFE *0004  2CFE *0004  0004  4C4F ! 4A45B !
! 04DC ! 4F50  0000  0010  0008  4552  525F  464C  4147 ! 16EAC !
! 04EC !*0004  8346  3224  0003  A1D4  0082  4624  0003 ! 29DEE !
! 04FE ! A1D6  0000  0000  0000  0000  0000  0000  0000 ! 0A1D6 !
-----------------------------------------------------------------------------
END OF BANK
```

The Makebank table for GUARDIAN

include the ability to bail out of your wrecked plane (useful if shot over enemy lines), extra weapons, turbo acceleration, you can even collect a falling fire extinguisher (weird!) to put out any on board fires.

There is so much that has been put into Skystrike Plus it really does represent a good buy, it's no Xenon II but then it's not twenty five quid either. At £11.95 (£9.95 for STOS club members) this game represents great value for money. If you want to see what can be done with STOS send those cheques and P.O.s off to Shadow Software (address at the end of the article) now, and no I'm not on commission it really is a fun (and at times frustrating) game.

MAESTRO PLUS

In the last issue Damon Howarth did a review of STOS Maestro, unfortunately he did not have the Maestro cartridge so he could not do a complete review of the whole package. I recently went to the PC Show at Earls Court in London and managed to get one at a very reasonable price so here are the bits missing from Damon,s review.

The cartridge itself is a sealed 'nearly Atari grey' box and measures a very compact 55mm x 84mm and is about 22mm deep so it does not suffer from the all too common cartridge droop problem. Once plugged in the unit looks almost like part of the ST so if you are into office/bedroom coordination this ones for you. The sound is input via a single standard female phono socket, but unfortunately there is no audio out socket on this version of the Maestro cartridge. As yet I have had no compatibility problems with any software that I regularly use so it gets full marks there, and just to clear up one point put forward in Damon's review the cartridge does not work with any other sampler software (unless you know different?).

The pieces of software that Damon could not try are really just icing on the cake of Maestro. The disko program lets an incoming sound go through the TV/Monitor speaker but also samples it and plays it back straight afterwards, this produces a weird effect somewhat similar to having two identical records playing at almost the same time but with a very slight delay between them. The Phaser program is not quite as fancy as disko but gives a sweeping effect to all sound that is input, some really spooky sound effects can be achieved with it, unfortunately the graphical front end of Phaser lets it down (there isn't one!).

Now for the real nitty gritty, just how well does Maestro perform compared to another device? Well I am currently working on some educational software (plug-anybody interested?) where samples provide an integral part of the communication link between computer and student. Before Maestro came along I was using a popular sampler of the printer port variety (not the ST/AMIGA Format one) and in order to obtain an audible speech quality I had to sample at around 10khz, the Maestro cartridge managed to come up with a quality very close to the 10khz samples at between 5khz and 7khz which resulted in a typical memory saving of about 15%-30%.

Although my tests were totally non-scientific and only produced over a period of two hours I think my results are pretty conclusive. Maestro Plus is the best sampler available for STOS owners and gives excellent quality samples, unfortunately it is slightly expensive compared to the other STOS products, so my overall VFM rating is 80% . If you can afford it (it's cheaper from New Atari User!!) rush out and buy it.

```
100 key off : click off : curs off : hide on : mode 0
110 INPLEN=10 : rem input 10 characters
120 XINPUT=15 : YINPUT=11 : rem position of input
130 locate 10,0 : print "Please Type Your Name"
140 gosub 6000
150 locate (40-(len(INP$)+6))/2,21
160 print "HELLO ";INP$
170 wait key
180 end
190  :
200  :
5940 rem ****************************************************************
5950 rem ***           FORM INPUT ROUTINE FOR NAME ENTERING           ***
5960 rem ****************************************************************
5970 rem *** parameters - inplen ( length of input text )              ***
5980 rem ***              xinput,yinput ( coords of inputted text )   ***
5990 rem ****************************************************************
6000 INP$=""
6010 COUNT=0
6020 SCANPRESS=0
6030 XINPUT2=XINPUT
6040 locate XINPUT,YINPUT
6050 print space$(INPLEN+1)
6060  :
6070 repeat
6080 locate XINPUT2,YINPUT
6090 pen 7 : print "_" : pen 1
6100 locate XINPUT2,YINPUT
6110 gosub 6220 : rem ***** GET KEY ******
6120 if (PRESSKEY$>=" " and PRESSKEY$<="~") and COUNT<INPLEN then print
PRESSKEY$; : bell : INP$=INP$+PRESSKEY$ : inc COUNT : inc XINPUT2
6130  :
6140 if SCANPRESS=14 and XINPUT2>XINPUT then dec COUNT : dec XINPUT2 : locate
XINPUT2,YINPUT : print "  "; : bell : INP$=left$(INP$,COUNT)
6150  :
6160 until (SCANPRESS=28 and XINPUT2>XINPUT)
6170 locate XINPUT,YINPUT
6180 print space$(INPLEN+1)
6190 return
6200  :
6210  :
6220 rem ****************************************************************
6230 rem ***  LITTLE ROUTINE TO GET A KEY PRESS, PUT INTO PRESSKEY$  ***
6240 rem ***                      AND SCANPRESS                        ***
6250 rem ****************************************************************
6260 repeat
6270 PRESSKEY$=upper$(inkey$)
6280 SCANPRESS=scancode
6290 until val(PRESSKEY$)<>0 or SCANPRESS<>0
6300 return
6310  :
```

Program 2 - An input routine

A TYPE-IN GAME!

Time for the programs, in the last issue I said that a game might be appearing in these pages, well I am now proud to present- Guardian (see Program 1 and Table 1). The program is really a bare bones game which you can play with and beef up, it involves guiding a little round ball type creature to collect fruit and avoid electric sparks and the guardian!!

Enter the listing as follows-

1) Load the INPDATA.ACB accessory from

your STOS backup disk.

2) Enter TABLE 1 and save it as GUARDIAN.MBK.
3) Type in PROGRAM 1 and then type LOAD GUARDIAN.MBK and the sprites will automatically load into their correct bank.
4) Resave the program.
5) Run it.

HOW IT WORKS

LINE 40 is a standard 'clear the screen' line that should be used in most programs
LINE 50 reserves a temporary screen which will be used to plot the sprites invisibly before transferring them to the screen
LINE 60 clears the screens
LINES 70-90 sets the variables for the initial positions of the player (X,Y), the guardian (XEN,YEN), and the fruit (XFRU,YFRU)
LINES 110-130 tell STOS to use sprites 4 and 5 as the electric shocks, where to move them around the screen, and finally how they should be animated
LINES 110-170 plots the sprites in their initial positions on screen 7 (invisible to the player), the screen is then swapped with the one that is being displayed and the sprites appear instantly with no flicker
LINE 180 resets the internal timer
LINES 210-240 read the joystick and increment or decrement the variables holding the players position by +5 or -5
LINES 260-290 if the player moves left then move the guardian left, if the player moves right move the guardian right only the guardian moves one pixel further than the player with each move.
LINES 310-320 if the player goes off the right of the screen move it onto the left hand side, if up then make it appear at the bottom etc.
LINES 340-370 prints the sprites in their new positions on the invisible (LOGIC) screen 7 and then swap it with the screen being shown.
LINE 390 tests to see if anything has collided with the 14x6 border around the player and puts its value into the variable HIT
LINE 400 tests to see if the fruit has been hit. If so the fruit is moved to another position and the score is incremented.
LINE 420 repeats the whole thing until the player hits something nasty or the timer reaches 1000
LINE 430 decides whether the player ran out of time or got killed and prints an appropriate message.
LINE 440 prints the score

The way Guardian was programmed certainly wasn't very efficient but STOS is so fast my coding does not have to be perfect. There are so many different ways to get good fast smooth animation in STOS and that was just one example, perhaps you could provide some more?

AND AN INPUT ROUTINE

Have you ever used a really good program written in some language or another only to find it has been let down by the way data is input, you know the sort of thing a question mark on the screen and if you press return without typing anything it throws you out of the program with a nasty error. If you do not want that to happen to your programs then look no further, Pete to the rescue.

The second (and last) program for this issue is a user definable input routine, it's especially useful for educational software (check out Treasure Search). Go type in PROGRAM 2.

HOW IT WORKS

LINE 100 this one clears the screen remember?
LINES 110-120 set up the variables needed for the routine
LINE 130 asks for your name
LINE 140 calls the routine. The input data is returned in the string INP$
LINES 150-160 works out where to place the text and prints it there. It would have been easier to use CENTRE "HELLO "+INP$
LINES 6000-6050 moves to where you want the text to go and clears a space for it
LINES 6080-6120 print the cursor and makes sure the key being pressed is an alphanumeric. If you wanted to extend the range of characters allowed you would have to change line 6120.
LINE 6140 handles the delete key
LINE 6160 keeps reading until the return key is pressed AND something has been typed
LINE 6180 cleans the screen of the input
LINES 6260-6300 read the keyboard until something is pressed, the value of that key is then stored in the variables SCANPRESS and PRESSKEY$

PROGRAMS WANTED

I still want your STOS programs for the P.D. library and smaller ones to include in the column, but don't forget to include an S.A.E. when you send me your disks otherwise it could be quite a while before you get them back. By the time you read this there should be quite a few new STOS public domain disks in the PAGE 6 library, including a disk with all the STOS programs from issues 39,40,41 and an educational disk with software called Treasure Search (by me!) and Multimat (by Jim Flewker) on it, Write to Page 6 Publishing for full details.

A CHALLENGE

Challenge time, hands up all those people who think they can write a small assembly language program that will change the value of a colour register several times a second to give the impression of loads of scrolling colours on screen (a bit like the old Atari rainbow effect on the 8-bits). First person to send me such a program will receive a collection of STOS public domain programs. Oh and it must be possible to pass the number (0-15) of the colour you wish to rainbow to the routine.

That's about it from me this issue, and if you are wondering what happened at the PC show this is it - NOTHING! Mandarin were not there (and I don't blame them, it was dead boring!). My thanks go to Chris Payne and Aaron Fothergill for being all round nice chappies and getting all the stuff to me before New Atari User's deadline. Next time I want to start presenting shorter routines that people can include in their own programs, things like form input routines, graphical effects, sound effects, anything reasonably small that can be used to jazz up a program, so if you have any programs like that send them to me at the address below.

*SKYSTRIKE PLUS is available for £11.95 from **SHADOW SOFTWARE, 1 LOWER MOOR, WHIDDEN VALLEY, BARNSTAPLE, NORTH DEVON, EX32 8NW***

*Anyone wishing to join the **STOS CLUB** should make out a cheque or postal order for £10 payable to **Aaron Fothergill (STOS CLUB)** and should send it to the above address remembering to mark the envelope 'STOS CLUB'.*

Write to Peter Hickman at 36 CLEVERLY ESTATE, WORMHOLT ROAD, LONDON W12 OLX

STOS FROM PAGE 6

There will be at least four new STOS disks added to the PAGE 6 LIBRARY this issue including a disk of all the programs published so far in the STOS column and Peter Hickman's educational program Treasure Search. If you do not already receive our catalogue update please write or telephone us on 0785 213928 and ask for a copy which will give you full details of these and other disks.

The RESOURCE FILE
where to find support for your Atari

The Resource File is a service provided by PAGE 6 to help Atari owners find sources of information, help and supply. An entry in this feature does not necessarily imply any endorsement by PAGE 6. The retailers shown are those who are known to have supported Atari for some time but things change and readers are advised to check for themselves to ensure that the information is still current. We would ask any readers who find information to be inaccurate or out of date to let us know so that an entry may be amended or deleted.

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Davygate
York
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USER GROUPS

ABC
Contact Mike Donoghue, 135, St. Leonards Road, Leicester, LE2 3BZ. Tel. 0533 700190. Retailer and both 8-bit and ST user groups.

A.C.E. USER GROUP
Contact Martin Sharpe, 28, Brooklyn Court, Bradford Road, Cleckheaton, West Yorks, BD19 4TJ. Tel.0274 851131 (24 hours). Monthly meetings, newsletter, trips, discounts etc.

A. U. G. (IRELAND)
Contact Mike Casey, 3, St. Kevins Park, Kilmacud, Co. Dublin. Ireland. Tel. 01 881830 or BBS 01 885634 (24 hours). Monthly meetings and newsletter.

BESTWOOD 8-BIT USER GROUP
Contact David Taylor, 60 Stevenholme Crescent, Bestwood Park, Nottingham, NG5 5JW. Tel. 0602 209735. 8-bit local users only

BOURNEMOUTH AND POOLE ATARI USER GROUP
Contact Colin Hunt. 248, Wimborne Road, Oakdale, Poole, Dorset. ST, 8-bit, hardware and software development.

BURY ST. EDMUNDS USERS GROUP
Contact Gary Brummage, 22, Ridley Road, Bury St. Edmunds, Suffolk, IP33 3HS. Please send SAE for details.

COLCHESTER ATARI USER GROUP
Contact Mike Harrison, 172, Harwich Road, Colchester, Essex, CO4 3DD. Meets fortnightly, supports all Atari systems. Tel. 0206 867931 or 0206 42900

CLUB CENACLE
Contact Michel Breton, Club Cenacle, B.P. 49, 95110, Sannois, FRANCE. XL, XE and ST users, newsletter, PD library, contact with users and user groups anywhere in the world welcome.

FaST (Fast ST Basic Users Group)
Contact Simon Rush, 42 York Road, Rayleigh, Essex, SS6 8SB. Tutorials in Basic and 68000. SAE for full details.

FLOPPYSHOP ST
Contact Steve Delaney, 50, Stewart Crescent, Northfield, Aberdeen, AB2 5SR. Tel. 0224 691824.

The GATEWAY CLUB
Contact Phil Herberer, 164d Radcliffe Road, Lakenheath, Suffolk. Tel. (Eriswell) 2363. All computer club with Atari section. Meets once a month.

LACE (LONDON ATARI COMPUTER ENTHUSIASTS)
Contact Glenn Leader, 143 Richmond Road, Leytonstone, London, E11 4BT. Tel. 01 556 0395. XL,XE, ST users. Great newsletter and PD library

LUG'S (LEEDS USER GROUP)
Contact Dave on 0532 717712 anytime. 1050, 810, cassette users welcome. Send SAE to P.O. Box TR7, Leeds, W. Yorks LS12 5PG

LVAUG (LEA VALLEY ATARI USERS GROUP)
Contact Matt Tydeman, 125 Cadmore Lane, Cheshunt, Herts, EN8 9JH. Regular meetings and newsletter, 8/16 bit.

MACCLESFIELD COMPUTER CLUB
Contact Peter Solomon. Tel. 0625 20782 evenings and weekends. All computer club with Atari section. Meets fortnightly.

NORTHERN ITALY ST FANS
Contact Carlo Bianchini, Viale Argonne 12, 27100 PAVIA, Italy

ROCHDALE ATARI COMPUTER ENTHUSIASTS (R.A.C.E.)
Contact The Secretary, P.O. Box 1, Rochdale, Lancs OL12 8TQ. SAE appreciated. All Ataris, meetings fortnightly

SIGATARI
Contact Glenn Leader, 143, Richmond Road, Leytonstone, London, E11 4BT. Tel 01 556 0395. For those interested in more unusual applications.

ST USER CLUB
Contact Tony, 8, Ethnard Road, Peckham, London, SE15 1RU. Members with double sided drives

STOURBRIDGE ATARI USER GROUP
Contact Les Taylor, 99, Bredon Road, Stourbridge, Wets Midlands, DY8 4LA. Tel 0384 379757. Meetings once a month for 8 bit computers.

S.W.A.G. (SOMERSET WEST ATARI GROUP)
Contact J. Evans, 14, Plein Street, Somerset West, 7130, Cape Province, South Africa. ST and 8 bit user group offering help and assistance to users in South Africa including township schools. Worldwide support appreciated.

VTB ATARI COMPUTER CLUB
Contact Christian Delabarre, Hekstraat 7, 9050 Evergem, Belgium. Tel. 091/26.29.29. For XI,XE,ST. Organised talks, visits etc.

WESTMORELAND ATARI COMPUTER ORGANIZATION (W.A.C.O.)
Contact Chuck Rosso, 209 Emrose Dr., Pittsburgh, PS 15235, U.S.A. Covering 8-bit, large PD library catalog, will mail.

WORLD ATARI PENPALS Int. User Group (WAP)
Contact Max Terveen, Magerhorst 8, Alphen a/d Rijn, 2402 LP, The Netherlands. Tel. 01720 45583. Members in USA, Canada, France, U.K., Greece, Germany, Saudi Arabia. Have circulating disk (8-bit and ST). Mail only.

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Name: **CHARLY**
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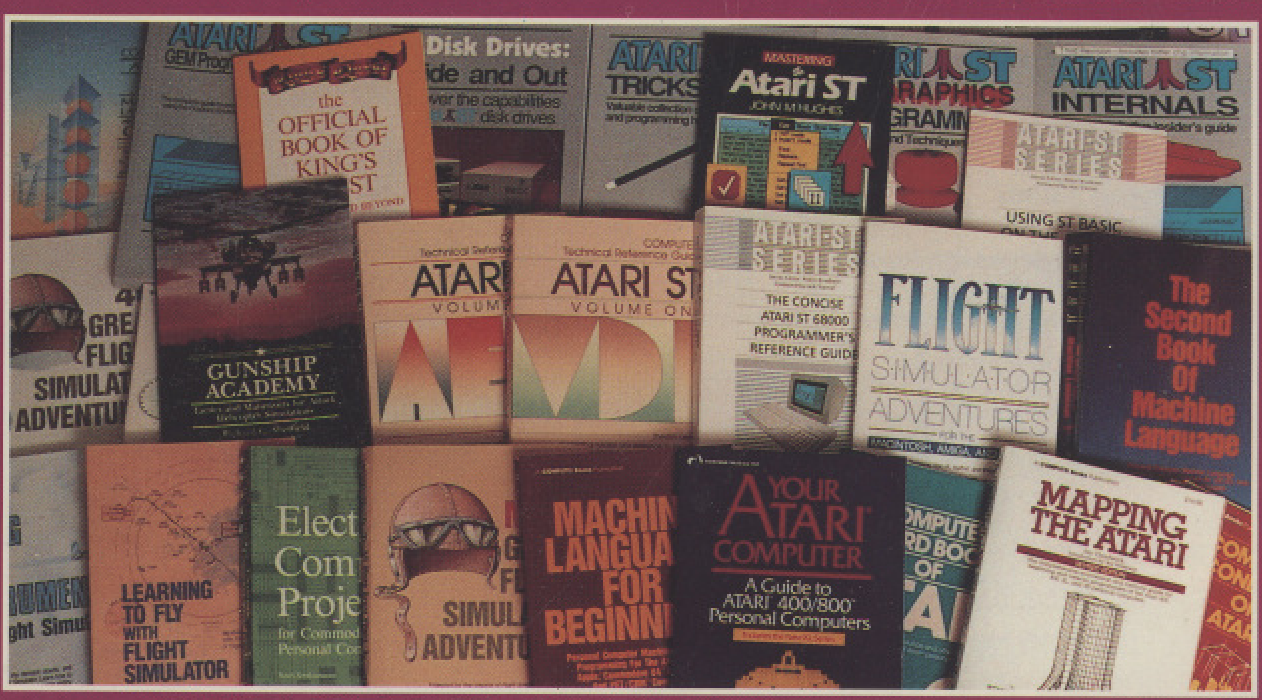
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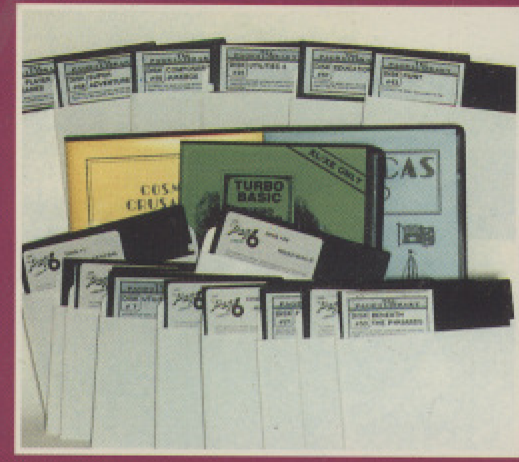
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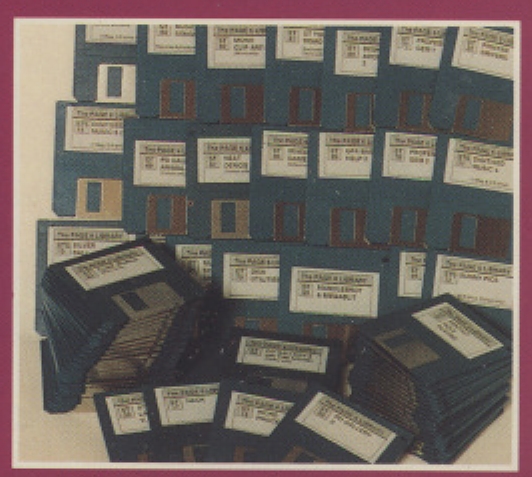
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